

# Climatology of the United States

## No. 20

### 1971-2000

**Station: DUBOIS EXPERIMENT STN, ID**

**COOP ID: 102707**

**Climate Division: ID 9**

**NWS Call Sign:**

**Elevation: 5,450 Feet Lat: 44° 15N**

**Lon: 112° 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	27.9	10.0	19.0	53+	1981	22	29.8	1981	-28	1937	21	9.6	1979	1428	0	.0	.0	.1	21.1	30.9	5.3
Feb	33.0	14.1	23.6	58	1963	6	31.5	1991	-26+	1933	10	13.9	1985	1161	0	.0	.0	.2	12.8	28.1	2.7
Mar	41.9	21.7	31.8	71	1986	28	40.8	1992	-13	1955	6	24.1	1976	1030	0	.0	.0	4.9	3.2	28.7	.3
Apr	54.7	29.7	42.2	82	1927	26	49.5	1987	-12	1929	7	31.1	1975	684	0	.0	.0	19.7	.3	18.7	.0
May	64.9	37.5	51.2	89	1954	19	57.3	1992	15	1929	1	45.8	1975	429	1	.0	.0	28.8	.0	6.5	.0
Jun	75.0	44.5	59.8	100	1926	27	66.0	1988	22+	1929	19	54.6	1998	197	38	.0	1.4	29.9	.0	.8	.0
Jul	84.2	50.8	67.5	102	1931	23	71.8	1998	30	1929	8	57.6	1993	63	140	.1	7.0	31.0	.0	@	.0
Aug	83.7	49.5	66.6	99	1928	10	71.1	1981	30+	1926	28	61.3	1993	68	116	.0	5.7	31.0	.0	.0	.0
Sep	72.8	40.6	56.7	95	1950	3	63.3	1990	2	1926	24	49.1	1985	278	30	.0	.4	29.4	.0	2.9	.0
Oct	58.2	31.3	44.8	84	1934	11	53.7	1988	2	1935	30	39.3	1984	629	0	.0	.0	24.7	.4	14.5	.0
Nov	38.9	19.9	29.4	69	1930	4	39.4	1999	-15	1955	16	19.7	1985	1069	0	.0	.0	5.2	8.4	27.6	.9
Dec	28.8	10.8	19.8	54	1939	5	27.6	1980	-31	1990	22	9.7	1990	1401	0	.0	.0	.1	19.4	30.7	4.1
Ann	55.3	30.0	42.7	102	Jul 1931	23	71.8	Jul 1998	-31	Dec 1990	22	9.6	Jan 1979	8437	325	.1	14.5	205.0	65.6	189.4	13.3

+ 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](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: 1925-2001

(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	.77	.72	.92	1942	28	1.62	1993	.09	1992	8.6	2.6	.1	.0	.21	.29	.40	.49	.59	.69	.80	.92	1.09	1.36	1.60	
Feb	.71	.68	1.10	1959	11	1.50	1983	.04	1972	6.9	2.4	.1	.0	.10	.16	.26	.36	.47	.58	.71	.87	1.09	1.44	1.78	
Mar	.95	.74	1.51	1995	11	3.14	1995	.22	1999	7.1	3.2	.2	@	.21	.30	.44	.56	.69	.82	.97	1.15	1.39	1.76	2.11	
Apr	1.12	1.20	1.25	1981	20	3.23	1978	.02	1987	7.3	3.8	.2	@	.08	.15	.29	.44	.61	.81	1.05	1.36	1.78	2.50	3.21	
May	2.00	1.53	1.21	1995	6	4.68	1998	.16	1992	9.9	5.8	.9	.1	.27	.44	.73	1.00	1.30	1.62	1.99	2.45	3.07	4.07	5.05	
Jun	1.67	1.80	2.60	1944	26	4.86	1995	.03	1974	8.5	4.6	.8	.1	.28	.42	.67	.90	1.13	1.39	1.68	2.04	2.52	3.30	4.04	
Jul	1.07	.82	1.69	1932	11	3.67	1977	.00	1999	6.2	3.1	.4	.1	.12	.24	.42	.58	.74	.91	1.10	1.33	1.63	2.12	2.59	
Aug	1.01	.97	2.00	1925	13	2.66	1989	.02	2000	5.7	3.0	.4	.0	.09	.16	.29	.43	.58	.76	.96	1.23	1.59	2.19	2.78	
Sep	1.01	.97	1.32	1977	15	2.46	1985	.00+	1987	4.5	2.4	.6	.2	.00	.12	.31	.47	.64	.81	1.02	1.26	1.59	2.12	2.64	
Oct	.84	.84	1.38	1934	19	1.98	1991	.00	1988	5.4	2.6	.3	@	.03	.09	.21	.33	.47	.62	.80	1.03	1.35	1.88	2.40	
Nov	1.01	.84	1.55	1970	30	3.09	1983	.00	1976	7.3	3.8	.2	.0	.10	.22	.38	.53	.68	.84	1.03	1.25	1.54	2.02	2.48	
Dec	.91	.84	1.24	1959	25	2.19	1982	.00	1976	8.3	3.3	.1	.0	.13	.25	.41	.53	.66	.79	.94	1.12	1.35	1.72	2.06	
Ann	13.07	12.59	2.60	Jun 1944	26	4.86	Jun 1995	.00+	Jul 1999	85.7	40.6	4.3	.5	8.38	9.25	10.39	11.27	12.06	12.83	13.63	14.52	15.62	17.22	18.63	

+ 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: 1925-2001

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

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Climate Division: ID 9

NWS Call Sign:

Elevation: 5,450 Feet

Lat: 44° 15N

Lon: 112° 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	9.1	8.3	11	11	7.5	1977	3	20.9	1993	32	1993	24	25	1993	8.0	3.3	1.0	.2	.0	29.1	28.3	26.5	17.6
Feb	6.3	4.6	13	13	6.0	1985	8	16.0	1998	34	1993	27	29	1993	5.8	2.7	.6	.1	.0	27.1	25.7	23.9	17.2
Mar	5.9	4.5	7	6	9.1	1979	1	14.5	1975	33	1993	2	24	1993	3.9	2.3	.6	.2	.0	15.9	12.6	10.9	7.8
Apr	2.7	1.0	1	#	9.0	1984	29	16.5	1975	20	1975	10	12	1975	2.1	1.1	.2	@	.0	1.5	.6	.4	.1
May	1.0	.0	#	0	12.0	1980	25	12.0	1980	8	1980	25	#+	1986	.6	.4	.1	@	@	.1	@	@	.0
Jun	.1	.0	0	0	2.0	1995	6	2.0	1995	0	0	0	0	0	.1	.1	.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	#	1994	1	#	1994	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.2	.0	#	0	4.0	1978	18	4.0	1978	2	1978	18	#+	1996	.1	@	@	.0	.0	@	.0	.0	.0
Oct	1.7	.5	#	0	6.0	1974	22	8.8	1991	5	1989	28	#+	1997	1.0	.7	.2	.1	.0	.8	.1	@	.0
Nov	9.4	8.7	2	1	10.0	1971	15	25.6	1988	15	1985	29	6	1985	4.9	3.5	.9	.3	@	10.8	6.7	4.0	.6
Dec	9.5	9.3	7	6	8.4	1971	9	19.5	1982	23	1971	14	17	1994	7.1	3.9	1.1	.3	.0	25.6	20.3	17.4	8.1
Ann	45.9	36.9	N/A	N/A	12.0	May 1980	25	25.6	Nov 1988	34	Feb 1993	27	29	Feb 1993	33.6	18.0	4.7	1.2	@	110.9	94.3	83.1	51.4

+ 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

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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>	7/07	6/30	6/26	6/22	6/18	6/14	6/10	6/05	5/30
<b>32</b>	6/22	6/15	6/11	6/07	6/03	5/30	5/26	5/21	5/15
<b>28</b>	6/08	5/31	5/26	5/21	5/17	5/12	5/08	5/02	4/25
<b>24</b>	5/15	5/10	5/06	5/03	4/30	4/27	4/24	4/20	4/15
<b>20</b>	4/28	4/22	4/18	4/14	4/11	4/07	4/04	3/30	3/24
<b>16</b>	4/15	4/08	4/03	3/29	3/25	3/21	3/16	3/11	3/04
<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>	8/24	8/29	9/02	9/05	9/08	9/11	9/14	9/18	9/23
<b>32</b>	9/09	9/13	9/15	9/18	9/20	9/22	9/25	9/27	10/01
<b>28</b>	9/16	9/22	9/26	9/29	10/02	10/05	10/09	10/13	10/18
<b>24</b>	9/25	10/01	10/05	10/08	10/11	10/14	10/18	10/22	10/27
<b>20</b>	10/10	10/15	10/19	10/23	10/26	10/29	11/02	11/06	11/11
<b>16</b>	10/19	10/25	10/29	11/01	11/05	11/08	11/11	11/15	11/21
<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>	104	96	91	86	81	77	72	66	59
<b>32</b>	130	122	117	113	109	104	100	95	87
<b>28</b>	164	155	148	143	138	133	127	121	112
<b>24</b>	187	179	173	168	164	159	154	149	141
<b>20</b>	226	216	209	203	198	192	186	179	169
<b>16</b>	253	243	236	230	224	218	212	205	195

\* 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)												
	Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
65	1428	1161	1030	684	429	197	63	68	278	629	1069	1401	8437
60	1273	1021	875	539	283	103	20	22	172	476	919	1246	6949
57	1180	937	782	454	204	62	9	9	121	387	829	1153	6127
55	1118	881	720	400	159	41	4	5	93	330	769	1091	5611
50	963	741	569	275	73	11	0	1	40	205	620	936	4434
32	427	269	136	29	0	0	0	0	0	7	178	403	1449

### Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	22	32	129	335	595	831	1101	1072	742	402	100	25	5386
55	0	0	0	16	41	182	392	363	145	12	0	0	1151
57	0	0	0	10	24	143	334	306	113	7	0	0	937
60	0	0	0	4	10	94	252	225	74	3	0	0	662
65	0	0	0	0	1	38	140	116	30	0	0	0	325
70	0	0	0	0	0	11	62	44	9	0	0	0	126

### 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	12	145	371	615	880	853	537	220	19	0	0	0	12	157	528	1143	2023	2876	3413	3633	3652	3652
45	0	0	1	70	235	465	725	698	395	116	2	0	0	0	1	71	306	771	1496	2194	2589	2705	2707	2707
50	0	0	0	25	127	322	570	543	262	45	0	0	0	0	0	25	152	474	1044	1587	1849	1894	1894	1894
55	0	0	0	7	52	200	417	393	148	13	0	0	0	0	0	7	59	259	676	1069	1217	1230	1230	1230
60	0	0	0	0	13	97	272	245	66	1	0	0	0	0	0	13	110	382	627	693	694	694	694	694
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	12	111	248	391	565	549	354	157	11	0	0	0	12	123	371	762	1327	1876	2230	2387	2398	2398

(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)