## 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

**COOP ID: 236460** 

Station: OZARK BEACH, MO

Climate Division: MO 4 NWS Call Sign:

Elevation: 700 Feet Lat: 36°40N Lon: 93°08W

									r	Гетр	eratur	re (°F)											
	Mea	<b>n</b> (1)						Extr	emes					Ü	Days (1) emp 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	43.9	20.7	32.3	80	1950	26	40.2	1998	-15+	1984	20	20.0	1979	1015	0	.0	.0	12.0	5.0	27.3	1.5		
Feb	49.9	24.5	37.2	87	1962	13	45.7	1999	-19	1951	2	27.0	1978	779	0	.0	.0	14.7	3.1	22.8	.4		
Mar	59.2	32.7	46.0	90	1967	12	50.8	1973	5+	1996	9	40.6	1978	589	0	.0	.0	24.0	.4	16.4	.0		
Apr	69.4	41.1	55.3	96	1955	23	62.3	1981	19	1957	13	49.6	1983	302	9	.0	.3	29.0	.0	5.1	.0		
May	77.0	50.3	63.7	99	2000	31	69.4	1987	29	1963	1	59.6	1976	126	83	.0	1.3	31.0	.0	@	.0		
Jun	85.0	59.3	72.2	105+	1954	30	76.1	1994	40	1984	1	67.4	1982	12	227	.2	9.4	30.0	.0	.0	.0		
Jul	90.3	63.7	77.0	116	1954	15	82.2	1980	48	1963	10	74.3	1976	0	372	1.8	20.8	31.0	.0	.0	.0		
Aug	89.4	62.0	75.7	108+	1964	5	80.5	1995	40+	1986	31	69.8	1992	4	336	2.2	17.8	31.0	.0	.0	.0		
Sep	81.7	54.9	68.3	106	1954	4	74.5	1998	30	1963	30	63.1	1974	45	143	.5	6.7	30.0	.0	.1	.0		
Oct	71.6	43.1	57.4	96	1953	2	62.5	1971	22+	1981	24	52.1	1988	255	18	.0	.7	30.3	.0	3.7	.0		
Nov	58.1	33.7	45.9	90	1955	14	52.1	1999	6+	1986	14	39.2	1976	574	0	.0	.0	22.9	.2	14.6	.0		
Dec	47.3	25.1	36.2	81+	1951	31	42.8	1971	-12+	1989	24	21.4	1983	894	0	.0	.0	14.4	2.9	24.6	.6		
	_				Jul			Jul		Feb	_		Jan										
Ann	68.6	42.6	55.6	116	1954	15	82.2	1980	-19	1951	2	20.0	1979	4595	1188	4.7	57.0	300.3	11.6	114.6	2.5		

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 075-A

- (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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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Station: OZARK BEACH, MO

Climate Division: MO 4 NWS Call Sign: Elevation: 700 Feet Lat: 36°40N Lon: 93°08W

										Pı	recipi	tation	(incl	nes)												
	Me	ans/	P	recip	itatio	on Total						ays (3	3)	Precipitation Probabilities (1)  Probability that the monthly/annual precipitation will be equal to or less than the indicated amount  Monthly/Annual Precipitation vs Probability Levels  These values were determined from the incomplete gamma distribution												
	Medi	ans(1)				Extremes	3			D	aily Pre	cipitatio	n													
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	2.30	1.95	3.14	1998	5	5.29	1982	.00	1986	6.5	4.6	1.3	.6	.26	.54	.92	1.25	1.59	1.95	2.35	2.84	3.48	4.52	5.50		
Feb	2.44	2.19	2.63	1999	7	6.33	1990	.30	1991	6.2	4.5	1.7	.6	.47	.69	1.05	1.38	1.71	2.07	2.48	2.97	3.63	4.68	5.68		
Mar	3.94	3.84	2.69	1954	24	9.07	1973	.80	1971	8.1	6.4	3.0	1.0	1.07	1.45	2.01	2.51	3.00	3.51	4.08	4.75	5.62	6.99	8.26		
Apr	3.99	3.64	3.65	1965	3	7.68	1983	.23	1989	8.7	6.6	3.2	1.1	.93	1.30	1.88	2.40	2.93	3.48	4.10	4.84	5.81	7.35	8.80		
May	4.29	3.88	4.02	1956	15	11.07	1990	1.32	1975	10.1	7.7	2.9	1.2	1.49	1.90	2.49	2.98	3.46	3.95	4.48	5.10	5.89	7.12	8.25		
Jun	4.59	4.35	4.66	1963	16	9.34	1989	1.43	1984	8.6	6.5	3.1	1.3	1.52	1.96	2.60	3.14	3.66	4.20	4.79	5.48	6.37	7.74	9.01		
Jul	3.61	3.08	4.00	1976	29	10.01	1998	.17	1986	6.7	5.0	2.3	1.2	.58	.89	1.42	1.92	2.43	2.99	3.63	4.41	5.46	7.15	8.78		
Aug	3.09	2.86	2.95	1966	22	8.12	1982	.02	2000	6.8	5.0	2.2	.9	.42	.68	1.12	1.55	2.00	2.50	3.07	3.78	4.73	6.29	7.79		
Sep	4.19	3.84	4.43	1954	30	11.70	1977	.28	1976	7.7	6.1	2.9	1.4	.53	.87	1.46	2.04	2.66	3.34	4.14	5.11	6.44	8.61	10.72		
Oct	2.98	2.96	3.85	1967	30	6.72	1984	.34	1989	6.9	4.9	2.2	.9	.82	1.10	1.53	1.91	2.27	2.66	3.09	3.59	4.24	5.27	6.23		
Nov	4.63	4.89	5.15	1994	5	9.89	1996	.38	1989	7.2	5.6	2.9	1.8	.86	1.28	1.95	2.58	3.22	3.91	4.69	5.64	6.90	8.92	10.85		
Dec	3.14	2.46	5.25	1982	2	9.72	1982	.65	1989	6.8	5.1	2.2	.7	.59	.88	1.34	1.76	2.19	2.66	3.19	3.83	4.67	6.03	7.33		
Ann	43.19	42.98	5.25	Dec 1982	2	11.70	Sep 1977	.00	Jan 1986	90.3	68.0	29.9	12.7	30.79	33.19	36.27	38.61	40.68	42.68	44.75	47.04	49.81	53.83	57.31		

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

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

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 236460** 

Station: OZARK BEACH, MO

Climate Division: MO 4 NWS Call Sign: Elevation: 700 Feet Lat: 36°40N Lon: 93°08W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nui	mber	of Day	/S (1)		
	Mean	s/Medi	ans (1)	)					Extre	mes (2)							ow Fa		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	3.8	2.7	#	#	8.0	1977	9	17.3	1977	12	1977	10	4	1977	2.0	1.6	.5	.1	.0	4.7	2.4	.4	@
Feb	2.7	1.9	#	#	12.0	1980	8	13.0	1980	12	1980	8	2	1980	1.2	1.1	.2	.1	@	2.5	1.0	.3	.1
Mar	1.4	.0	#	0	20.0	1994	9	20.0	1994	20	1994	9	1	1994	.4	.4	.2	@	@	.6	.2	.1	@
Apr	.1	.0	#	0	2.0	1971	5	2.0	1971	1	1971	5	#+	1980	@	@	.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	.5	1993	30	.5	1993	1	1993	30	#	1993	@	.0	.0	.0	.0	@	.0	.0	.0
Nov	.7	.0	#	0	4.0	1971	23	7.0	1975	4+	1975	27	#+	1980	.3	.2	.2	.0	.0	.4	.2	.0	.0
Dec	1.7	.0	#	0	5.0	1985	13	10.0	2000	8	2000	14	2	2000	.8	.7	.3	.1	.0	1.8	.6	.2	.0
Ann	10.4	4.6	N/A	N/A	20.0	Mar 1994	9	20.0	Mar 1994	20	Mar 1994	9	4	Jan 1977	4.7	4.0	1.4	.3	@	10.0	4.4	1.0	.1

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

- (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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

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**COOP ID: 236460** 

Lon: 93°08W

Lat: 36°40N

Elevation: 700 Feet

Station: OZARK BEACH, MO

Climate Division: MO 4 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(\*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 5/13 5/08 5/05 5/02 4/29 4/26 4/23 4/19 4/14 32 4/14 4/28 4/24 4/21 4/18 4/16 4/11 4/08 4/04 28 4/18 4/13 4/10 4/07 4/04 4/01 3/30 3/26 3/22 4/02 24 4/06 3/29 3/27 3/24 3/21 3/19 3/15 3/11 20 3/25 3/19 3/14 3/10 3/06 3/03 2/27 2/22 2/16 3/08 2/22 16 3/15 3/03 2/26 2/18 2/13 2/08 2/01 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(\*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 10/02 36 9/25 9/29 10/04 10/07 10/09 10/12 10/15 10/19 32 10/02 10/08 10/12 10/16 10/20 10/23 10/27 10/31 11/06 28 10/18 10/24 10/28 10/31 11/04 11/07 11/10 11/14 11/20 24 10/31 11/06 11/10 11/14 11/17 11/21 11/24 11/29 12/04 20 11/08 11/14 11/18 11/22 11/25 11/29 12/02 12/07 12/13 12/05 12/09 12/25 1/02 16 11/16 11/24 11/30 12/14 12/19 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 173 168 164 160 157 153 148 36 180 141 32 209 201 195 190 186 181 176 171 163 28 235 227 222 217 213 204 208 198 191 24 258 251 246 242 238 234 229 224 217 274 246 237 20 290 281 268 263 258 252 16 315 305 298 292 287 282 277 270 262

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:

<sup>\*</sup> Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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**COOP ID: 236460** 

Lon: 93°08W

Station: OZARK BEACH, MO

**Climate Division: MO 4** 

Elevation: 700 Feet Lat: 36°40N

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree I	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1015	779	589	302	126	12	0	4	45	255	574	894	4595		
60	860	639	436	178	56	2	0	0	11	141	426	739	3488		
57	767	559	350	119	29	0	0	0	4	89	344	652	2913		
55	706	507	294	87	18	0	0	0	2	63	291	594	2562		
50	563	379	175	30	4	0	0	0	0	21	177	452	1801		
32	159	73	6	0	0	0	0	0	0	0	7	103	348		

Base	Cooling Degree Days (1)														
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
32	167	219	440	697	980	1204	1395	1355	1088	786	423	232	8986		
55	1	8	15	94	285	514	682	642	400	136	17	10	2804		
57	0	4	9	66	235	454	620	580	342	101	10	6	2427		
60	0	0	2	36	168	366	527	487	260	59	3	0	1908		
65	0	0	0	9	83	227	372	336	143	18	0	0	1188		
70	0	0	0	1	30	113	221	198	62	3	0	0	628		

										Gro	wing	Degre	e Uni	ts (2)														
Base	Growing Degree Units (Monthly)														Growing Degree Units (Accumulated Monthly)													
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec J													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
40	48	105	259	482	757	985	1168	1127	870	565	242	81	48	153	412	894	1651	2636	3804	4931	5801	6366	6608	6689				
45	19	52	155	343	602	835	1013	972	720	414	146	36	19	71	226	569	1171	2006	3019	3991	4711	5125	5271	5307				
50	2	17	81	221	447	685	858	817	570	275	76	12	2	19	100	321	768	1453	2311	3128	3698	3973	4049	4061				
55	0	4	37	121	302	535	703	662	425	161	31	2	0	4	41	162	464	999	1702	2364	2789	2950	2981	2983				
60	0	0	8	54	173	387	548	507	289	75	7	0	0	0	8	62	235	622	1170	1677	1966	2041	2048	2048				
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)															
50/86	52	101	194	328	485	651	768	738	565	375	174	71	52	153	347	675	1160	1811	2579	3317	3882	4257	4431	4502				

(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

**NWS Call Sign:** 

### 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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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