

## Monthly Time Series

**Station:** CLAY CENTER(SC)

**State:** NE

**ID:** a257899

**Latitude:** 40.57 degrees

**Longitude:** -98.13 degrees

**Elevation:** 1810 feet

**Station period of record:** 07/14/1982 - 11/08/2004

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**CLIMOD Product:** Monthly Time Series

**Creation Time:** 11/08/2004 09:52 EST

**Element:** Average Temperature **Units:** degF

**Analysis:** Mean

**Max allowable missing days:** 5

**Lowest Acceptable Quality of Data:** Raw data

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Year(s)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1982	-999z	-999z	-999z	-999z	-999z	-999z	-999m	72.2	63.5	51.7	34.6	29.0	-999g
1983	25.7	31.9	38.0	42.8	55.8	67.2	76.9	78.8	65.4	51.8	36.9	8.6	48.3
1984	23.0	32.9	32.4	45.4	58.1	70.7	73.9	74.9	60.4	52.1	38.7	26.5	49.1
1985	19.3	22.6	41.1	53.0	62.6	64.9	71.9	67.4	60.2	50.5	27.1	21.5	46.8
1986	32.3	25.6	42.5	51.1	61.1	73.7	77.0	70.0	66.3	51.7	34.7	30.4	51.4
1987	29.9	36.3	39.6	52.9	65.2	72.9	76.4	71.1	64.8	47.6	41.0	29.0	52.2
1988	18.8	26.6	39.3	49.7	65.2	76.2	75.5	74.9	64.7	48.9	38.9	32.2	50.9
1989	31.7	16.5	36.8	53.2	61.0	68.1	75.2	72.7	62.0	53.0	37.0	19.6	48.9
1990	32.6	30.4	41.3	49.4	57.8	73.4	74.2	73.8	67.8	52.3	42.8	20.7	51.4
1991	20.0	38.0	41.4	52.6	64.7	75.2	76.4	74.0	65.6	50.9	31.3	33.6	52.0
1992	34.1	37.5	42.6	50.3	60.8	67.2	70.4	68.6	64.2	52.3	33.9	24.8	50.6
1993	17.7	19.7	35.5	47.2	59.3	67.9	73.2	73.1	59.7	50.1	34.5	31.0	47.4
1994	21.3	20.5	41.7	49.3	63.7	73.7	71.3	72.1	66.1	53.5	39.9	29.0	50.2
1995	24.7	34.3	39.4	45.9	54.8	69.3	75.6	76.7	62.3	51.5	36.3	27.5	49.8
1996	19.6	30.8	31.2	48.8	58.7	71.1	71.3	69.8	60.6	51.1	28.4	20.7	46.8
1997	18.8	25.9	39.7	43.7	56.3	71.4	75.2	71.9	66.3	52.4	35.7	29.0	48.8
1998	26.9	35.6	32.0	49.1	65.1	69.0	76.3	74.8	70.0	54.3	42.3	29.8	52.1
1999	24.9	37.3	38.8	49.4	59.9	68.3	77.8	72.1	62.3	52.4	45.9	32.5	51.8
2000	27.9	35.2	42.9	49.7	64.6	69.0	74.7	77.4	66.7	54.6	29.7	16.6	50.7
2001	27.3	20.6	35.4	53.8	62.3	70.0	77.9	74.6	64.1	52.1	45.5	31.8	51.3
2002	29.4	30.0	31.9	51.2	58.4	75.9	77.7	73.7	65.4	45.2	37.9	31.7	50.7
2003	25.4	25.3	40.5	50.9	58.1	68.0	76.5	74.6	60.2	54.4	36.6	29.8	50.0
2004	21.3	23.4	43.7	51.3	62.8	67.3	71.5	69.1	68.1	52.8	-999w	-999z	53.1b



1989	0.67	0.59	0.00	0.22	2.38	9.80	3.94	3.82	4.41	0.66	0.00	0.26	26.76
1990	0.39	0.00	4.06	0.39	5.55	3.74	4.02	7.44	1.06	0.93	0.72	0.86	29.17
1991	0.41	0.00	1.89	3.70	6.30	3.31	0.16	1.22	0.51	2.17	1.13	2.45	23.25
1992	0.53	0.90	1.73	0.59	2.09	4.29	8.03	4.65	0.65	2.76	1.05	0.94	28.19
1993	1.62	1.38	1.10	2.23	3.16	5.76	11.30	8.39	1.93	3.07	0.43	0.94	41.30
1994	0.68	0.72	0.00	3.82	0.67	3.11	5.55	1.81	2.80	1.54	2.78	0.98	24.45
1995	0.53	0.16	2.01	3.11	5.95	2.13	2.32	2.40	0.75	2.05	0.31	0.12	21.83
1996	0.59	0.00	0.34	1.93	8.35	4.02	4.56	3.94	3.50	0.31	3.15	0.00	30.69
1997	0.12	1.20	0.47	1.57	4.13	3.23	2.09	5.28	4.17	2.32	2.16	0.61	27.35
1998	0.00	0.83	2.77	3.07	2.01	5.71	10.16	1.73	1.69	1.85	2.75	0.00	32.56
1999	0.53	0.20	0.45	4.57	5.39	6.61	1.18	4.60	0.59	0.12	0.32	0.26	24.82
2000	0.00	1.83	1.90	1.06	1.73	5.00	5.71	1.81	1.30	2.56	1.61	4.62	29.12
2001	0.77	9.62	0.12	1.74	8.42	1.34	3.26	2.19	5.49	1.26	1.21	0.24	35.66
2002	1.19	0.14	3.45	1.97	4.45	0.39	0.87	2.40	2.13	3.27	0.00	0.00	20.25
2003	0.19	0.16	0.57	3.10	4.17	4.21	0.59	2.72	3.03	1.06	0.75	0.00	20.55
2004	4.09	2.04	1.70	1.34	5.39	2.28	7.09	0.71	3.07	0.83	-999w	-999z	28.54b
<b>Max value</b>	4.09	9.62	8.25	5.53	8.42	9.80	11.30	8.39	5.49	4.17	4.29	4.62	41.30
<b>Min value</b>	0.00	0.00	0.00	0.12	0.67	0.39	0.12	0.71	0.32	0.04	0.00	0.00	16.73
<b>Mean</b>	0.61	1.03	1.62	2.33	4.59	4.30	3.76	3.23	2.49	1.83	1.28	0.77	27.67
<b>Median</b>	0.47	0.46	1.40	1.98	4.82	4.11	3.06	2.72	2.21	1.85	0.90	0.42	27.35
<b># years</b>	22	22	22	22	22	22	22	23	23	23	22	22	21

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**Flags:**

a = 1, b = 2, c = 3, ..., or z = 26 or more missing days in a month or missing months in a year.  
A = Accumulation over more than one day, S = Subsequent

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**Notes:**

Long-term means based on columns. Thus, the sum (or average) of the monthly values may not equal the annual value.

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**Monthly Time Series**

**Station:** CLAY CENTER(SC)

**State:** NE

**ID:** a257899

**Latitude:** 40.57 degrees    **Longitude:** -98.13 degrees    **Elevation:** 1810 feet

**Station period of record:** 07/14/1982 - 11/08/2004

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**CLIMOD Product:** Monthly Time Series

**Creation Time:** 11/08/2004 09:54 EST

**Element:** Min Temperature **Units:** degF

**Analysis:** Min value

**Max allowable missing days:** 5

**Lowest Acceptable Quality of Data:** Raw data

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<b>Year(s)</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Annual</b>
1982	-999z	-999z	-999z	-999z	-999z	-999z	- 999m	50	34	25	9	1	-999z
1983	7	1	15	23	33	39	54	56	30	27	5	-20	-20
1984	-13	6	6	26	33	47	56	53	23	25	14	0	-13
1985	-14	-11	15	24	43	39	49	43	29	24	2	-11	-14
1986	-2	-17	-1	22	38	51	54	48	40	23	-7	5	-17
1987	3	14	13	24	47	44	51	47	38	15	13	-3	-3
1988	-13	-13	5	23	38	48	51	42	38	15	12	5	-13
1989	5	-15	-6	16	28	41	56	46	28	17	3	-27	-27
1990	4	2	13	17	30	42	43	50	32	24	11	-16	-16
1991	-11	7	15	32	31	48	50	51	24	16	-4	8	-11
1992	0	10	15	20	31	47	46	47	34	25	8	-1	-1
1993	-10	-14	8	22	36	43	58	47	33	12	1	8	-14
1994	-8	-14	12	12	34	51	48	49	38	24	20	2	-14
1995	-11	5	-4	22	31	46	49	53	23	23	3	-1	-11
1996	-16	-18	-4	17	37	46	53	51	31	20	4	-10	-18
1997	-21	3	7	19	30	50	49	53	43	5	6	10	-21
1998	-1	15	-15	26	38	39	62	59	46	32	24	-17	-17
1999	-10	14	15	27	36	44	50	54	31	24	19	5	-10
2000	4	6	17	19	38	43	57	53	31	17	3	-11	-11
2001	-8	-10	14	26	37	45	59	50	36	24	8	-1	-10
2002	1	-2	-8	14	32	49	58	51	39	19	14	7	-8
2003	-14	-10	6	22	37	46	52	55	32	20	2	9	-14
2004	-19	-8	19	20	26	40	49	47	42	28	-999w	-999z	-999z
<b>Max value</b>	7	15	19	32	47	51	62	59	46	32	24	10	-1
<b>Min value</b>	-21	-18	-15	12	26	39	43	42	23	5	-7	-27	-27
<b>Mean</b>	-6.6	-2.3	7.1	21.5	34.7	44.8	52.4	50.3	33.7	21.1	7.7	-2.7	-13.5
<b># years</b>	22	22	22	22	22	22	22	23	23	23	22	22	21

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**Notes:**

Long-term means based on columns. Thus, the sum (or average) of the monthly values may not equal the annual value.

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**Longitude:** -98.13 degrees

**Elevation:** 1810 feet

**Station period of record:** 07/14/1982 - 11/08/2004

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**CLIMOD Product:** Monthly Time Series

**Creation Time:** 11/08/2004 09:55 EST

**Element:** Growing Degree Days (base 50) **Units:** degF

**Analysis:** Sum

**Max allowable missing days:** 5

**Lowest Acceptable Quality of Data:** Raw data

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Year(s)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1982	-999z	-999z	-999z	-999z	-999z	-999z	-999m	696	414	123	5	0	-999g
1983	0	0	26	23	203	523	841	899	488	125	21	0	3149
1984	0	0	0	34	275	631	750	781	371	164	13	0	3019
1985	0	0	10	180	399	454	685	546	370	93	2	0	2739
1986	0	0	76	114	347	712	834	622	491	104	0	0	3300
1987	0	0	20	184	473	687	822	654	445	78	45	0	3408
1988	0	0	22	89	472	785	790	774	442	78	3	0	3455
1989	0	0	56	209	352	540	781	704	375	191	3	2	3213
1990	0	0	31	120	253	702	751	740	538	143	38	0	3316
1991	0	0	25	124	474	755	817	742	479	193	3	0	3612
1992	0	1	33	125	340	517	632	577	428	171	1	0	2825
1993	0	0	6	69	287	540	718	714	294	139	0	0	2767
1994	0	3	33	138	435	713	662	688	493	151	10	0	3326

1995	0	9	48	46	173	578	791	828	400	136	7	0	3016
1996	0	2	4	92	282	633	659	617	327	150	0	0	2766
1997	2	0	17	40	205	642	780	676	486	216	0	0	3064
1998	0	0	40	77	470	575	815	767	598	156	4	2	3504
1999	0	6	23	75	309	549	863	684	369	141	47	0	3066
2000	0	4	24	101	451	567	765	847	511	218	5	0	3493
2001	0	0	0	162	381	600	865	765	424	124	81	0	3402
2002	0	2	0	153	280	776	857	735	464	64	4	0	3335
2003	0	0	55	148	253	542	823	764	315	195	9	0	3104
2004	0	0	48	126	420	516	667	593	543	126	-999w	-999z	3039b
<b>Max value</b>	2	9	76	209	474	785	865	899	598	218	81	2	3612
<b>Min value</b>	0	0	0	23	173	454	632	546	294	64	0	0	2739
<b>Mean</b>	0.1	1.2	27.1	110.4	342.5	615.3	771.3	713.6	437.6	142.6	13.7	0.2	3184.7
<b># years</b>	22	22	22	22	22	22	22	23	23	23	22	22	21

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#### Flags:

a = 1, b = 2, c = 3, ..., or z = 26 or more missing days in a month or missing months in a year.

A = Accumulation over more than one day, S = Subsequent

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#### Notes:

Long-term means based on columns. Thus, the sum (or average) of the monthly values may not equal the annual value.

In months with missing data, monthly sums have been adjusted to include estimates for missing days.

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### Frost Summary

**Station:** CLAY CENTER(SC)

**State:** NE

**ID:** a257899

**Latitude:** 40.57 degrees **Longitude:** -98.13 degrees **Elevation:** 1810 feet

**Station period of record:** 07/14/1982 - 11/08/2004

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**CLIMOD Product:** Frost Summary

**Creation Time:** 11/08/2004 09:57 EST

**Requested years:** 1982 - 2004

**Distribution:** Normal

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#### Probability of Later Date in Spring Than Indicated

<u>Temperature</u>	<u>Earliest</u>	<u>.90</u>	<u>.80</u>	<u>.70</u>	<u>.60</u>	<u>.50</u>	<u>.40</u>	<u>.30</u>	<u>.20</u>	<u>.10</u>	<u>Latest</u>
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36	04/15	04/20	04/24	04/27	04/30	05/03	05/05	05/08	05/11	05/15	05/25
32	04/10	04/14	04/18	04/20	04/23	04/25	04/27	04/30	05/03	05/07	05/13
28	03/30	04/03	04/07	04/11	04/13	04/16	04/18	04/21	04/24	04/28	05/03
24	03/15	03/25	03/30	04/02	04/04	04/07	04/09	04/12	04/15	04/19	04/22
20	03/05	03/13	03/18	03/21	03/24	03/27	03/30	04/02	04/06	04/10	04/12
16	02/17	02/28	03/06	03/10	03/13	03/16	03/20	03/23	03/27	04/02	04/06

**Probability of Earlier Date in Fall Than Indicated**

<u>Temperature</u>	<u>Earliest</u>	<u>.10</u>	<u>.20</u>	<u>.30</u>	<u>.40</u>	<u>.50</u>	<u>.60</u>	<u>.70</u>	<u>.80</u>	<u>.90</u>	<u>Latest</u>
36	09/15	09/18	09/21	09/23	09/25	09/27	09/29	10/01	10/03	10/07	10/09
32	09/19	09/18	09/23	09/27	09/30	10/03	10/07	10/10	10/14	10/19	11/03
28	09/19	09/25	10/01	10/05	10/08	10/12	10/15	10/18	10/22	10/28	11/11
24	09/22	10/05	10/11	10/16	10/19	10/23	10/27	10/30	11/04	11/10	11/11
20	10/08	10/18	10/25	10/30	11/03	11/07	11/11	11/15	11/20	11/26	12/08
16	10/20	10/25	11/01	11/06	11/10	11/14	11/18	11/22	11/27	12/04	12/19

**Probability of Longer Than Indicated Freeze Free Period (days)**

<u>Temperature</u>	<u>Longest</u>	<u>.10</u>	<u>.20</u>	<u>.30</u>	<u>.40</u>	<u>.50</u>	<u>.60</u>	<u>.70</u>	<u>.80</u>	<u>.90</u>	<u>Shortest</u>
36	166	163	157	153	150	147	144	140	137	131	126
32	198	177	171	167	163	160	156	152	148	142	135
28	207	197	190	185	181	178	174	170	165	158	144
24	240	219	212	206	202	198	194	189	184	176	170
20	268	252	243	235	229	224	218	212	205	195	182
16	281	266	257	251	246	241	236	231	225	216	203

**Notes:**

- These tables present probabilities of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date (month/day).
- Temperature thresholds are in degrees Fahrenheit.

**Frost Statistics**

**Station:** CLAY CENTER(SC)

**State:** NE

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**Latitude:** 40.57 degrees **Longitude:** -98.13 degrees **Elevation:** 1810 feet

Station period of record: 07/14/1982 - 11/08/2004

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CLIMOD Product: Frost Statistics

Creation Time: 11/08/2004 09:59 EST

Threshold temperature: 28.0 degrees F

Spring/Fall Cutoff Date: August 1

Requested years: 1982 - 2004

Distribution: Normal

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Year	<u>Last Spring Occurrence</u>			<u>First Fall Occurrence</u>			Season Length
	Date	Temp	Missing	Date	Temp	Missing	
1982	missing		--	Oct 21	25	0	--
1983	Apr 16	28	0	Oct 13	27	0	179 days
1984	Apr 1	26	0	Sep 28	25	0	179 days
1985	Apr 9	24	0	Oct 1	25	0	174 days
1986	Apr 22	26	0	Oct 13	22	0	173 days
1987	Apr 4	24	0	Oct 11	22	0	189 days
1988	Apr 27	27	0	Oct 24	27	0	179 days
1989	May 1	27	0	Sep 23	28	0	144 days
1990	Apr 17	22	0	Oct 9	27	0	174 days
1991	Mar 30	19	0	Sep 19	24	0	172 days
1992	Apr 27	26	0	Oct 16	26	0	171 days
1993	Apr 2	22	0	Oct 10	27	0	190 days
1994	Apr 7	23	0	Oct 25	24	0	200 days
1995	Apr 11	27	0	Sep 21	27	0	162 days
1996	Apr 13	21	0	Oct 18	22	0	187 days
1997	Apr 16	24	0	Oct 26	9	0	192 days
1998	Apr 17	26	0	Nov 11	23	0	207 days
1999	Apr 18	26	0	Oct 4	27	0	168 days
2000	Apr 21	27	0	Oct 5	27	0	166 days
2001	Apr 17	25	0	Oct 16	26	0	181 days
2002	Apr 25	24	0	Oct 13	26	0	170 days
2003	Apr 10	22	0	Oct 25	24	0	197 days
2004	May 3	26	0	Oct 2	27	0	151 days
Prob. occ.	100%			100%			
Earliest	Mar 30			Sep 19			144 days
90%	Apr 3			Oct 28			158 days
50%	Apr 16			Oct 12			178 days
10%	Apr 28			Sep 25			197 days
Latest	May 3			Nov 11			207 days

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- **Date** is the date of last spring/first fall occurrence of a minimum temperature less than or equal to the threshold.
- 'no' indicates no occurrence recorded during season.
- 'missing' indicates 18 or more days of missing data before an occurrence was found.
- **Temp** is the minimum temperature for that day.
- **Missing** is the number of days with missing temperature data following the last spring occurrence or preceding the first fall occurrence of this temperature.
- **Season Length** is the number of days between the last spring and first fall occurrences.