

2004

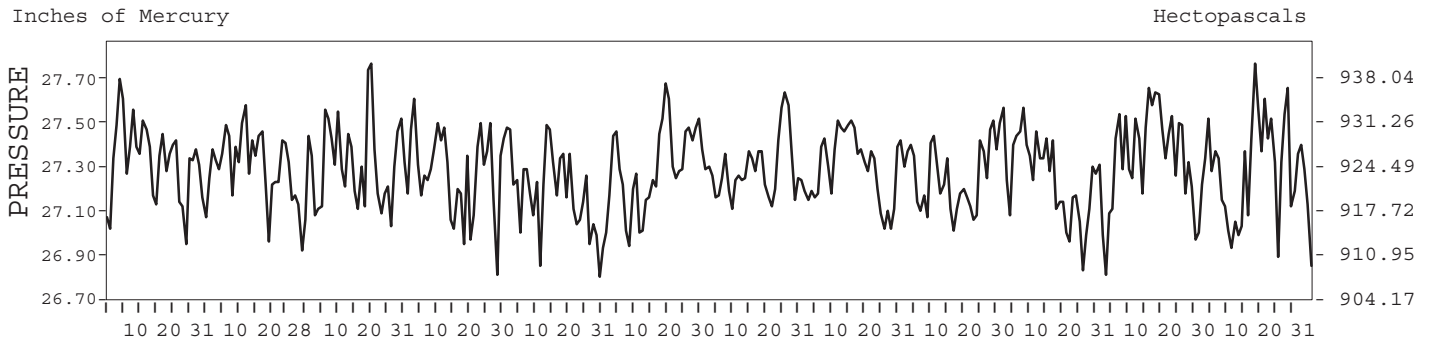
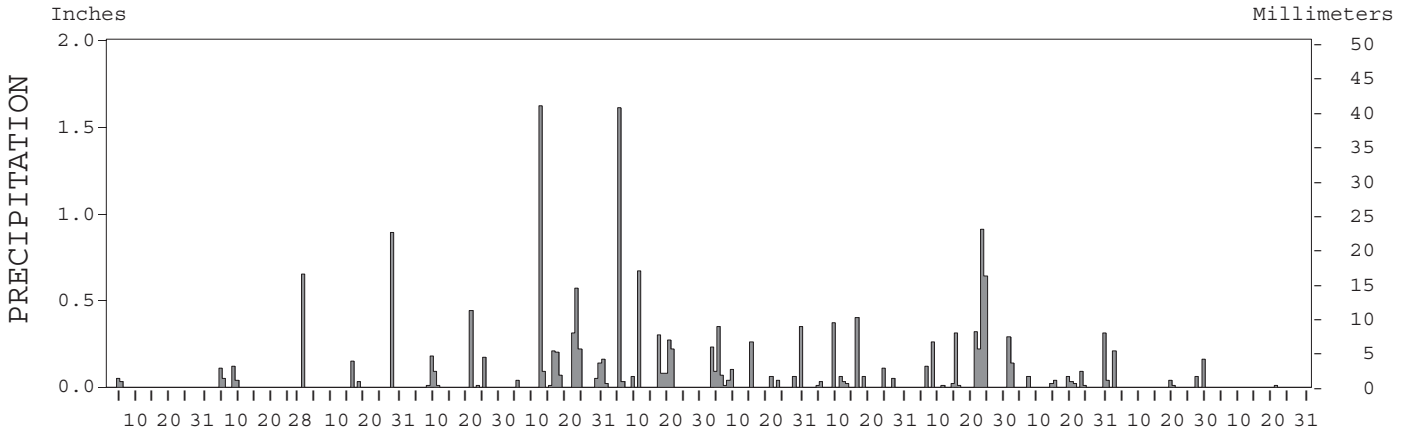
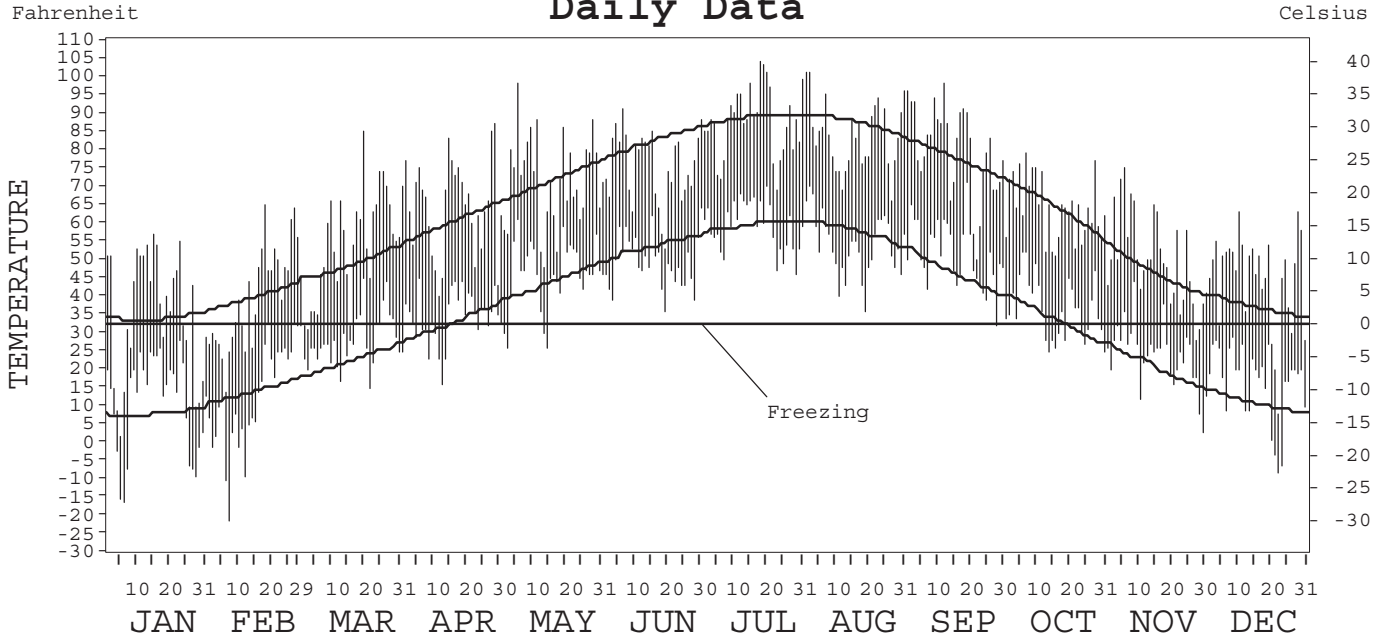
LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-3237

VALENTINE,  
NEBRASKA (VTN)

Daily Data



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# METEOROLOGICAL DATA FOR 2004

## VALENTINE, NE (VTN)

LATITUDE: 42° 51' 31" N      LONGITUDE: 100° 33' 05" W      ELEVATION (FT): GRND: 2586      BARO: 2589      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 24032

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	34.7	40.0	54.8	64.3	71.6	75.5	87.5	83.7	79.8	64.0	50.4	44.8	62.6	
	HIGHEST DAILY MAXIMUM	57	65	85	87	98	91	104	101	98	79	75	63	104	
	DATE OF OCCURRENCE	15	18	19	28	05	06	18	02+	12	07	06	29+	JUL 18	
	MEAN DAILY MINIMUM	11.2	12.9	28.0	34.5	46.0	49.3	59.0	54.0	51.4	36.5	24.3	16.5	35.3	
	LOWEST DAILY MINIMUM	-16	-21	15	16	26	36	46	36	32	25	3	-8	-21	
	DATE OF OCCURRENCE	06	07	21	12	14+	19	29	19	28	31+	30	23	FEB 07	
	AVERAGE DRY BULB	23.0	26.5	41.4	49.4	58.8	62.4	73.3	68.9	65.6	50.3	37.4	30.7	49.0	
	MEAN WET BULB	19.4	23.4	35.4	41.3				58.9	56.2	45.1	32.4	26.0		
	MEAN DEW POINT	13.2	17.9	27.1	31.1				51.7	49.4	39.7	25.4	19.1		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	1	1	12	8	8	0	0	0	0	30
	MAXIMUM ≤ 32°	14	11	3	0	0	0	0	0	0	0	2	6	36	
	MINIMUM ≤ 32°	31	27	22	10	4	0	0	0	1	11	27	31	164	
MINIMUM ≤ 0°	8	5	0	0	0	0	0	0	0	0	0	3	16		
H/C	HEATING DEGREE DAYS	1297	1112	724	462	225	124	11	47	103	452	820	1057	6434	
	COOLING DEGREE DAYS	0	0	0	0	40	55	275	175	128	1	0	0	674	
RH	MEAN (PERCENT)	71	73	62	54	63	64	62	59	62	70	67	67	64	
	HOUR 00 LST	76	80	71	64	76	78	74	73	71	80	78	75	75	
	HOUR 06 LST	79	84	79	75	82	86	90	86	84	87	82	77	83	
	HOUR 12 LST	60	63	49	38	48	51	46	42	48	56	53	52	50	
	HOUR 18 LST	67	61	46	36	47	47	39	38	43	55	56	61	50	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	0	0	0	1	2	0	1	2	2	0	0	9	
	THUNDERSTORMS	0	0	1	3	14	13	21	18	9	2	0	0	81	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	27.32	27.30	27.32	27.27	27.18	27.31	27.28	27.31	27.25	27.22	27.38	27.27	27.28	
	MEAN SEA-LEVEL PRESS. (IN.)	30.15	30.11	30.07	30.00				29.98	29.92	29.93	30.16	30.06		
WINDS	RESULTANT SPEED (MPH)	2.7	2.3	4.1	1.9	1.5	0.8	1.6	3.5	4.6	2.7	3.9	5.8	2.2	
	RES. DIR. (TENS OF DEGS.)	30	27	30	33	33	22	20	23	19	25	27	28	27	
	MEAN SPEED (MPH)	9.2	10.2	13.0	10.6	12.2	10.1	8.9	10.2	12.1	10.7	9.3	10.5	10.6	
	PREVAIL. DIR. (TENS OF DEGS.)	33	32	33	35	31	02	19	21	18	20	20	29	33	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	32	31	37	36	39	35	37	40	45	40	33	44	45	
	DIR. (TENS OF DEGS.)	34	32	32	33	30	32	17	20	18	29	33	27	18	
	DATE OF OCCURRENCE	27	20+	13+	20	11	01	08	30	19	29	27	30	SEP 19	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	41	39	47	44	49	44	46	46	54	48	40	49	54	
DIR. (TENS OF DEGS.)	34	33	31	33	30	33	22	20	18	29	33	27	18		
DATE OF OCCURRENCE	27	20+	13	20	11	01	04	30	19	29	27	30	SEP 19		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.08	0.97	1.07	0.91	3.71	3.32	1.66	1.14	3.11	0.82	0.48	0.01	17.28	
	GREATEST 24-HOUR (IN.)	0.05	0.65	0.89	0.44	1.68	1.64	0.43	0.40	0.91	0.35	0.21	0.01	1.68	
	DATE OF OCCURRENCE	04	29	27	20	11-12	04-05	03-04	15	22	29-30	01	20	MAY 11-12	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	2	5	3	7	14	9	12	10	11	11	5	1	90	
PRECIPITATION ≥ 0.10	0	3	2	3	8	5	5	3	8	2	2	0	41		
PRECIPITATION ≥ 1.00	0	0	0	0	1	1	0	0	0	0	0	0	2		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	3.0	7.3	1.5	0.1	0.0	0.0	0.0	0.0	0.0	T	1.0	T	12.9	
	GREATEST 24-HOUR (IN.)	2.0	2.0	1.5	0.1	0.0	0.0	0.0	0.0	0.0	T	1.0	T	2.0	
	DATE OF OCCURRENCE	04	29+	15	10						29	28	24+	FEB 29+	
	MAXIMUM SNOW DEPTH (IN.)	3	5	2	0	0	0	0	0	0	0	1	0	5	
	DATE OF OCCURRENCE	07+	09	03+								29		FEB 09	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	2	3	1	0	0	0	0	0	0	0	1	0	7		

# NORMALS, MEANS, AND EXTREMES

## VALENTINE, NE (VTN)

LATITUDE: 42° 51' 31" N      LONGITUDE: 100° 33' 05" W      ELEVATION (FT): GRND: 2586      BARO: 2589      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 24032

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	33.8	39.4	48.4	59.8	71.2	81.9	88.3	86.9	77.2	63.5	45.9	36.7	61.1
	MEAN DAILY MAXIMUM	43	33.7	38.7	47.3	60.0	71.1	81.3	88.7	86.7	76.8	63.8	46.9	36.6	61.0
	HIGHEST DAILY MAXIMUM	50	72	78	85	100	99	110	114	108	104	96	86	74	114
	YEAR OF OCCURRENCE		1987	1982	2004	1992	1989	1988	1990	1965	1998	1993	1999	1998	JUL 1990
	MEAN OF EXTREME MAXS.	43	59.1	63.0	75.3	85.2	91.5	98.5	103.7	101.7	96.8	86.3	72.2	61.1	82.9
	NORMAL DAILY MINIMUM	30	7.8	13.7	22.1	32.4	43.7	53.2	59.1	57.3	45.8	33.1	20.1	10.5	33.2
	MEAN DAILY MINIMUM	43	7.7	13.2	21.3	33.0	43.9	53.8	60.2	57.8	47.0	33.8	20.8	10.9	33.6
	LOWEST DAILY MINIMUM	50	-30	-31	-29	3	19	30	38	34	17	-1	-22	-39	-39
	YEAR OF OCCURRENCE		1988	1994	1980	1997	1967	1969	1971	1988	1991	1991	1959	1989	DEC 1989
	MEAN OF EXTREME MINS.	43	-15.9	-11.6	-2.7	15.5	27.9	40.0	47.7	44.1	29.3	16.3	-2	-13.2	14.8
	NORMAL DRY BULB	30	20.8	26.6	35.3	46.1	57.5	67.6	73.7	72.1	61.5	48.3	33.0	23.6	47.2
	MEAN DRY BULB	43	20.6	25.9	34.3	46.6	57.4	67.6	74.3	72.3	62.0	48.6	33.9	23.7	47.3
	MEAN WET BULB	21	19.3	23.4	30.5	39.4	50.2	58.6	59.2	62.1	52.3	41.1	28.8	21.3	40.5
	MEAN DEW POINT	21	13.5	16.6	23.0	30.6	42.7	52.1	52.7	55.5	44.3	32.7	22.0	14.5	33.4
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.3	1.2	6.9	13.9	12.9	5.8	0.4	0.0	0.0	41.4	
MAXIMUM ≤ 32°	30	13.8	9.5	4.7	0.7	0.0	0.0	0.0	0.0	0.0	0.4	5.8	11.3	46.2	
MINIMUM ≤ 32°	30	30.7	27.6	26.9	15.2	2.6	*	0.0	0.0	2.1	13.4	27.0	30.8	176.3	
MINIMUM ≤ 0°	30	9.7	5.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	*	1.7	6.2	24.3	
H/C	NORMAL HEATING DEG. DAYS	30	1386	1091	932	571	260	57	11	19	175	516	952	1285	7255
	NORMAL COOLING DEG. DAYS	30	0	0	0	5	27	141	286	242	75	3	0	0	779
RH	NORMAL (PERCENT)	30	69	67	65	59	60	61	59	61	58	61	66	67	63
	HOUR 00 LST	30	73	74	72	68	71	71	70	71	67	69	72	72	71
	HOUR 06 LST	30	75	76	78	76	78	79	78	80	76	76	76	74	77
	HOUR 12 LST	30	60	58	54	47	47	47	46	47	43	45	54	58	50
	HOUR 18 LST	30	63	58	50	44	45	44	42	42	40	46	58	62	50
S	PERCENT POSSIBLE SUNSHINE	29	63	62	59	59	62	69	76	76	71	68	61	60	66
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	19	1.0	1.3	1.1	1.1	0.5	0.7	0.9	0.8	0.6	1.0	0.6	0.6	10.2
	THUNDERSTORMS	19	0.0	0.1	0.4	2.1	7.5	11.3	12.3	9.5	4.1	1.7	0.2	0.0	49.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1			6.4			3.2							
	MIDNIGHT-MIDNIGHT (OKTAS)	1						3.2							
	MEAN NO. DAYS WITH:														
	CLEAR	1		4.0	7.0		1.0	9.0							
PARTLY CLOUDY	1	1.0	4.0	4.0		3.0	7.0								
CLOUDY	1	5.0	4.0	9.0		10.0	3.0								
PR	MEAN STATION PRESSURE (IN)	15	27.32	27.30	27.25	27.24	27.21	27.23	27.30	27.29	27.28	27.30	27.31	27.26	27.27
	MEAN SEA-LEVEL PRES. (IN)	20	30.12	30.10	30.02	29.94	29.90	29.88	29.91	29.94	29.98	30.03	30.05	30.11	30.00
WINDS	MEAN SPEED (MPH)	21	9.1	9.3	10.2	10.8	10.7	9.9	9.1	9.0	9.8	9.3	9.5	9.4	9.7
	PREVAIL. DIR (TENS OF DEGS)	21	32	32	33	33	17	16	19	18	18	30	29	29	32
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	9	43	52	43	49	49	46	51	53	45	51	45	44	53
	DIR. (TENS OF DEGS)		32	30	33	30	33	11	26	20	18	29	30	27	20
	YEAR OF OCCURRENCE		1996	1996	2000	1996	1999	2000	1999	1996	2004	2001	1998	2004	AUG 1996
	MAXIMUM 5-SECOND:														
SPEED (MPH)	9	53	63	52	61	61	55	70	60	54	60	54	51	70	
DIR. (TENS OF DEGS)		33	30	33	31	33	31	34	33	18	29	31	32	34	
YEAR OF OCCURRENCE		1996	1996	1996	1997	1999	2000	1998	2002	2004	2001	1998	2000	JUL 1998	
PRECIPITATION	NORMAL (IN)	30	0.30	0.48	1.11	1.97	3.20	3.01	3.37	2.20	1.61	1.22	0.72	0.33	19.52
	MAXIMUM MONTHLY (IN)	49	0.82	1.43	4.23	5.49	8.96	7.09	8.96	6.71	5.91	3.97	2.62	1.81	8.96
	YEAR OF OCCURRENCE		1979	1962	1977	2001	1962	1983	1983	1966	1973	1995	1985	1987	JUL 1983
	MINIMUM MONTHLY (IN)	49	T	0.01	0.01	0.25	0.45	0.44	0.28	0.12	0.11	T	0.01	T	T
	YEAR OF OCCURRENCE		1961	1957	1997	1967	1966	1976	1980	2000	1958	1958	1962	1991	DEC 1991
	MAXIMUM IN 24 HOURS (IN)	49	0.66	0.95	1.64	1.91	2.83	2.96	3.87	3.38	2.45	2.42	1.12	1.23	3.87
	YEAR OF OCCURRENCE		1988	2000	1977	1971	1962	1992	1998	1971	1973	1997	1985	1987	JUL 1998
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	4.6	4.6	7.0	9.3	11.3	10.6	10.0	8.0	6.7	5.4	5.0	4.4	86.9	
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.1	0.1	0.7	0.6	0.9	0.5	0.2	0.1	0.1	*	3.3	
SNOWFALL	NORMAL (IN)	30	4.8	6.2	8.1	4.4	0.1	0.0	0.0	0.7	1.5	6.3	4.8	36.9	
	MAXIMUM MONTHLY (IN)	47	15.2	17.5	51.0	30.4	3.3	T	0.0	T	18.4	12.4	34.5	22.5	51.0
	YEAR OF OCCURRENCE		1982	1962	1977	1995	1979	1991		1990	1985	1995	1985	1987	MAR 1977
	MAXIMUM IN 24 HOURS (IN)	47	7.1	8.3	24.0	12.8	3.3	T	0.0	T	18.4	6.2	13.5	18.3	24.0
	YEAR OF OCCURRENCE		1988	1977	1977	1995	1979	1991		1990	1985	1995	1985	1987	MAR 1977
	MAXIMUM SNOW DEPTH (IN)	42	18	15	15	12	2	0	0	0	10	4	19	22	22
	YEAR OF OCCURRENCE		1988	1979	1980	1995	1979				1985	1995	1985	1987	DEC 1987
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.4	2.1	2.3	1.2	0.0	0.0	0.0	0.0	0.1	0.5	1.9	1.6	11.1	

PRECIPITATION (inches) 2004 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0.52	0.16	1.04	0.84	0.76	2.40	1.84	1.75	0.32	0.33	1.01	0.23	11.20
1976	0.27	0.32	0.57	2.03	1.56	0.44	2.12	0.99	2.22	0.38	0.09	0.22	11.21
1977	0.34	0.79	4.23	3.54	6.14	2.93	6.12	4.40	1.72	0.88	0.59	1.00	32.68
1978	0.25	1.22	0.19	3.25	3.38	2.52	4.17	3.19	0.56	0.12	0.55	0.68	20.08
1979	0.82	0.29	1.80	1.52	3.16	4.54	2.37	0.80	1.41	1.61	0.61	0.02	18.95
1980	0.38	0.68	1.52	0.46	2.67	2.79	0.28	3.03	0.43	1.37	0.09	0.42	14.12
1981	0.09	0.13	1.30	0.49	2.73	1.28	5.51	3.65	0.88	1.95	0.67	0.76	19.44
1982	0.50	0.07	1.05	0.74	6.70	2.11	3.20	3.37	2.70	1.80	0.88	0.53	23.65
1983	0.10	0.06	1.31	1.39	5.19	7.09	8.96	0.83	1.18	0.66	1.17	0.56	28.50
1984	0.11	0.34	0.90	3.40	2.73	2.09	6.53	1.40	0.57	0.55	0.57	0.12	19.31
1985	0.56	0.06	0.57	1.54	0.70	2.23	2.03	2.90	2.58	0.82	2.62	0.29	16.90
1986	0.11	0.61	1.96	2.63	2.95	2.31	2.36	2.47	2.70	2.06	0.59	T	20.75
1987	0.13	1.33	2.51	0.55	3.78	3.46	3.31	3.38	0.86	0.57	1.97	1.81	23.66
1988	0.78	0.66	0.55	1.92	4.54	3.36	2.25	3.36	1.70	0.08	0.62	0.18	20.00
1989	0.02	0.74	0.74	0.48	1.24	1.33	2.85	2.05	1.95	0.57	0.12	0.33	12.42
1990	0.04	0.51	1.31	1.20	4.43	2.03	3.10	2.36	0.67	0.51	0.64	0.27	17.07
1991	0.15	0.59	1.77	2.65	4.80	5.03	2.33	2.59	0.56	1.52	1.26	T	23.25
1992	0.54	0.21	1.41	0.79	0.81	5.40	2.25	4.44	1.38	0.43	0.48	0.14	18.28
1993	0.43	0.74	0.99	3.54	1.11	3.92	3.23	2.40	1.78	1.08	1.08	0.50	20.80
1994	0.31	0.45	0.26	1.86	1.10	4.40	4.14	3.35	0.37	1.11	0.45	0.64	18.44
1995	0.02	0.55	1.32	3.67	5.76	3.82	1.90	0.78	2.93	3.97	0.10	0.06	24.88
1996	0.53	0.17	0.13	1.27	4.63	2.33	0.78	0.57	4.47	1.28	0.41	0.14	16.71
1997	0.20	0.31	0.01	3.41	2.72	3.55	4.73	1.70	1.85	2.70	0.27	0.03	21.48
1998	0.10	0.24	0.96	1.25	3.44	5.07	6.15	1.67	0.62	3.54	1.43	0.04	24.51
1999	0.15	0.72	0.43	3.12	2.57	4.38	3.76	0.62	3.39	0.05	0.09	0.11	19.39
2000	0.23	1.16	0.68	2.67	3.67	3.22	4.66	0.12	0.50	2.08	0.31	0.18	19.48
2001	0.50	0.23	0.33	5.49	3.11	2.13	3.05	1.72	1.93	0.50	1.57	T	20.56
2002	0.01	0.25	1.25	1.48	2.72	0.49	0.65	2.47	1.18	0.48	0.04	0.20	11.22
2003	0.31	0.27	1.17	2.27	3.14	4.14	1.68	0.87	0.59	0.43	0.48	0.41	15.76
2004	0.08	0.97	1.07	0.91	3.71	3.32	1.66	1.14	3.11	0.82	0.48	0.01	17.28
POR= 116 YRS	0.44	0.53	1.10	2.07	2.91	3.13	2.76	2.24	1.37	1.04	0.52	0.41	18.52

WBAN : 24032

AVERAGE TEMPERATURE (°F) 2004 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	24.3	19.0	28.4	44.0	57.9	66.8	77.6	73.4	58.7	51.3	31.2	25.6	46.5
1976	21.4	33.5	33.5	48.6	56.5	68.0	75.3	74.5	62.4	45.1	28.3	24.3	47.6
1977	11.1	30.7	32.8	50.6	63.0	71.2	74.7	67.4	62.6	48.7	34.4	19.8	47.3
1978	8.1	10.3	32.8	44.2	57.5	67.9	72.4	70.6	66.0	48.1	29.7	12.5	43.3
1979	4.1	13.3	33.0	45.7	54.9	67.1	73.4	70.7	66.5	49.3	30.1	32.2	45.0
1980	19.4	23.8	30.5	48.7	58.4	70.5	77.7	72.6	63.7	47.6	38.1	28.4	48.3
1981	28.5	26.4	38.7	54.1	54.7	68.3	73.9	71.2	63.3	48.2	39.8	23.6	49.2
1982	10.2	25.6	34.6	42.8	57.0	62.5	75.1	73.9	61.0	47.5	31.4	26.6	45.7
1983	29.5	34.4	34.7	40.5	52.7	65.1	75.4	78.3	63.3	50.0	34.7	3.9	46.9
1984	21.8	32.0	32.2	42.5	56.7	67.8	73.9	75.0	57.3	47.5	35.2	21.3	46.9
1985	17.7	21.6	37.2	51.3	62.5	64.1	75.2	69.5	58.3	47.6	18.0	15.9	44.9
1986	26.7	24.3	41.6	45.3	56.7	70.2	74.3	68.7	59.0	48.3	31.0	29.3	48.0
1987	28.5	33.0	33.2	50.9	62.8	69.7	76.5	68.9	60.2	45.4	37.8	26.2	49.4
1988	13.2	21.0	34.5	45.9	60.8	76.4	75.3	73.2	61.0	47.3	35.7	26.2	47.5
1989	27.8	13.8	32.2	48.1	58.2	65.5	76.8	73.0	61.8	49.5	35.4	16.3	46.5
1990	31.7	28.2	36.9	46.0	56.0	70.3	72.2	72.4	66.2	49.0	38.3	17.2	48.7
1991	17.2	34.0	37.5	47.8	59.7	71.5	74.1	73.7	62.6	46.1	28.9	29.6	48.6
1992	28.8	34.8	39.0	48.1	59.2	64.2	65.7	66.4	62.2	49.1	30.2	20.6	47.4
1993	17.7	16.5	36.0	44.0	57.1	63.9	69.9	69.5	57.3	46.8	29.0	28.7	44.7
1994	18.5	17.0	38.4	46.5	62.1	68.8	70.2	71.4	64.4	50.7	36.7	28.0	47.7
1995	26.5	31.5	35.9	40.3	52.8	66.7	74.2	77.0	62.1	46.5	35.2	28.8	48.1
1996	16.4	27.7	26.9	44.4	54.9	68.1	72.0	72.4	59.6	48.5	25.4	17.4	44.5
1997	17.3	28.2	38.0	39.9	53.6	68.7	73.5	70.8	64.9	50.2	32.3	29.3	47.2
1998	24.3	34.6	28.7	46.6	59.3	62.7	75.3	73.8	69.3	49.3	39.3	28.0	49.3
1999	25.3	36.3	39.1	45.2	56.4	66.7	74.5	73.3	58.2	48.6	43.4	30.9	49.8
2000	25.7	33.4	40.0	46.2	59.1	64.6	74.3	75.3	64.0	50.5	26.0	18.4	48.1
2001	29.5	22.5	35.9	49.7	58.2	67.7	77.0	74.6	63.9	49.7	40.1	26.5	49.6
2002	27.2	31.1	25.3	46.7	53.7	72.5	79.6	72.9	63.1	40.4	35.5	29.9	48.2
2003	24.2	21.8	36.2	48.5	56.8	65.6	75.8	76.6	60.6	52.6	31.4	29.0	48.3
2004	23.0	26.5	41.4	49.4	58.8	62.4	73.3	68.9	65.6	50.3	37.4	30.7	49.0
POR= 116 YRS	20.9	24.5	33.4	46.2	57.0	67.4	74.2	72.0	62.0	49.4	34.5	24.8	47.2

HEATING DEGREE DAYS (base 65°F) 2004 VALENTINE, NE (VTN)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	5	5	231	435	1008	1214	1348	907	969	485	268	58	6933
1976-77	5	3	151	613	1094	1255	1672	952	990	431	101	8	7275
1977-78	0	35	122	499	914	1397	1760	1526	993	618	254	72	8190
1978-79	4	32	109	515	1053	1622	1888	1446	986	574	326	67	8622
1979-80	14	24	77	478	1040	1010	1408	1189	1063	495	231	26	7055
1980-81	0	14	112	536	804	1128	1124	1075	806	325	328	37	6289
1981-82	21	7	114	514	748	1274	1697	1100	936	659	250	108	7428
1982-83	1	16	189	536	1000	1183	1096	850	931	730	385	91	7008
1983-84	6	0	168	461	903	1892	1334	952	1008	667	288	43	7722
1984-85	0	0	280	542	886	1351	1461	1211	854	415	136	112	7248
1985-86	13	29	279	531	1404	1517	1182	1134	720	591	264	20	7684
1986-87	0	36	189	511	1013	1098	1126	893	976	424	124	35	6425
1987-88	10	50	170	601	811	1198	1600	1270	936	570	204	4	7424
1988-89	6	21	160	543	871	1195	1144	1428	1013	523	234	91	7229
1989-90	5	11	169	471	882	1505	1026	1025	864	581	292	26	6857
1990-91	25	0	117	501	795	1479	1476	861	845	514	207	1	6821
1991-92	1	2	167	585	1076	1089	1115	867	800	515	211	70	6498
1992-93	49	75	141	491	1039	1370	1462	1354	892	623	244	100	7840
1993-94	5	31	253	561	1076	1116	1435	1339	822	558	149	36	7381
1994-95	13	22	111	435	841	1139	1190	932	895	733	370	85	6766
1995-96	11	3	183	571	885	1115	1503	1073	1175	611	322	50	7502
1996-97	1	0	218	511	1185	1466	1472	1023	830	745	350	29	7830
1997-98	18	16	105	474	974	1101	1256	844	1118	546	211	124	6787
1998-99	3	0	52	480	764	1140	1221	796	796	589	264	63	6168
1999-00	5	6	227	502	642	1049	1209	910	769	558	202	99	6178
2000-01	2	9	147	444	1163	1434	1095	1183	897	467	229	85	7155
2001-02	5	2	111	472	736	1187	1164	941	1222	541	367	26	6774
2002-03	3	13	161	756	877	1078	1255	1202	883	492	269	66	7055
2003-04	0	3	204	384	1003	1107	1297	1112	724	462	225	124	6645
2004-	11	47	103	452	820	1057							

WBAN : 24032

COOLING DEGREE DAYS (base 65°F) 2004 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0	0	0	16	24	124	400	272	47	18	0	0	901
1976	0	0	0	1	11	157	330	306	81	2	0	0	888
1977	0	0	0	3	46	203	307	116	57	0	0	0	732
1978	0	0	0	0	27	163	239	213	148	0	0	0	790
1979	0	0	0	4	20	136	280	208	129	0	0	0	777
1980	0	0	0	15	34	198	404	255	78	4	0	0	988
1981	0	0	0	6	16	145	304	207	70	0	0	0	748
1982	0	0	0	0	10	39	321	299	73	0	0	0	742
1983	0	0	0	0	12	99	338	422	125	0	0	0	996
1984	0	0	0	0	38	134	280	318	55	5	0	0	830
1985	0	0	0	9	66	92	337	176	87	0	0	0	767
1986	0	0	0	4	15	185	295	160	15	0	0	0	674
1987	0	0	0	11	61	184	372	178	34	0	0	0	840
1988	0	0	0	4	80	351	331	285	48	0	0	0	1099
1989	0	0	0	19	29	110	378	265	81	0	0	0	882
1990	0	0	0	16	17	192	257	237	160	12	0	0	891
1991	0	0	0	4	52	203	290	281	102	5	0	0	937
1992	0	0	0	14	41	54	74	125	63	6	0	0	377
1993	0	0	0	0	7	73	163	179	28	5	0	0	455
1994	0	0	0	9	67	156	183	227	97	0	0	0	739
1995	0	0	0	0	0	147	304	383	103	5	0	0	942
1996	0	0	0	0	18	149	224	233	64	6	0	0	694
1997	0	0	0	0	6	146	287	204	110	23	0	0	776
1998	0	0	0	1	42	61	331	282	189	0	0	0	906
1999	0	0	0	0	8	121	308	271	31	2	0	0	741
2000	0	0	0	0	27	93	299	333	124	0	0	0	876
2001	0	0	0	16	27	171	383	308	85	3	0	0	993
2002	0	0	0	1	20	256	463	265	112	0	0	0	1117
2003	0	0	0	7	23	90	340	370	79	6	0	0	915
2004	0	0	0	0	40	55	275	175	128	1	0	0	674

SNOWFALL (inches) 2004 VALENTINE, NE (VTN)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	1.1	11.5	1.4	5.8	5.2	8.3	T	0.0	0.0	33.3
1976-77	0.0	0.0	0.0	0.8	1.5	3.5	7.8	10.3	51.0	2.5	0.0	0.0	77.4
1977-78	0.0	0.0	0.0	1.1	3.0	8.3	3.8	15.9	2.5	9.7	0.0	0.0	44.3
1978-79	0.0	0.0	0.0	0.0	7.0	14.8	10.8	5.1	7.3	8.0	3.3	0.0	56.3
1979-80	0.0	0.0	0.0	1.9	6.2	0.5	7.6	12.6	21.6	2.9	T	0.0	53.3
1980-81	0.0	0.0	0.0	2.6	0.5	5.8	1.5	3.8	2.2	0.0	0.0	0.0	16.4
1981-82	0.0	0.0	0.0	1.4	8.0	11.2	15.2	1.5	6.0	4.6	0.0	0.0	47.9
1982-83	0.0	0.0	0.0	3.0	2.0	5.3	0.8	0.2	5.7	1.9	0.0	0.0	18.9
1983-84	0.0	0.0	T	0.0	12.0	12.4	1.5	4.0	7.2	8.5	0.1	0.0	45.7
1984-85	0.0	0.0	0.1	0.3	1.5	1.5	5.5	0.7	3.0	0.1	0.0	0.0	12.7
1985-86	0.0	0.0	18.4	T	34.5	4.9	1.6	2.6	6.9	3.6	0.0	0.0	72.5
1986-87	0.0	0.0	0.0	1.0	5.7	T	1.9	12.3	15.7	T	0.0	0.0	36.6
1987-88	0.0	0.0	0.0	0.7	3.2	22.5	9.6	5.9	5.9	13.2	0.0	0.0	61.0
1988-89	0.0	0.0	0.0	0.0	3.2	2.2	0.3	12.0	13.8	T	T	T	31.5
1989-90	0.0	0.0	0.0	T	T	5.0	0.4	8.6	10.9	T	0.0	T	24.9
1990-91	0.0	T	0.0	1.8	6.4	3.8	3.2	6.3	6.6	2.2	T	T	30.3
1991-92	0.0	0.0	0.0	4.6	11.9	T	5.4	1.1	3.2	T	T	0.0	26.2
1992-93	0.0	0.0	0.0	0.0	5.0	1.9	7.3	14.4	1.4	12.6	0.0	0.0	42.6
1993-94	0.0	0.0	T	0.6	6.4	4.8	5.0	10.1	1.5	5.8	0.0	0.0	34.2
1994-95	0.0	0.0	0.0	0.0	3.4	8.4	0.2	2.0	5.5	30.4	T	0.0	49.9
1995-96	0.0	0.0	1.0	12.4	1.0								
1996-97				7.0	4.6					9.0	T	0.0	
1997-98	0.0	0.0	0.0	4.4	3.5	0.7	2.5	2.3		0.0	0.0	0.0	
1998-99	0.0	0.0	0.0	0.0	12.0	2.5	4.5	10.1	1.2	1.1	0.0	0.0	31.4
1999-00	0.0	0.0	0.0	T	1.0	3.1	5.7	4.3	0.2	T	0.0	0.0	14.3
2000-01	0.0	0.0	0.0	T	5.8	5.1	8.9	6.2	1.5	2.8	0.0	0.0	30.3
2001-02	0.0	0.0	0.0	0.0	12.0	T	T	6.6	17.7	2.4	1.1	0.0	39.8
2002-03	0.0	0.0	0.0	7.7	1.0	2.0	5.7	5.1	5.1	8.0	T	0.0	34.6
2003-04	0.0	0.0	0.0	T	6.4	8.5	3.0	7.3	1.5	0.1	0.0	0.0	26.8
2004-	0.0	0.0	0.0	T	1.0	T							
POR= 48 YRS	0.0	T	0.5	1.5	5.0	4.4	4.4	5.5	6.8	4.3	0.3	T	32.7

WBAN : 24032

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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2004  
VALENTINE,  
NEBRASKA (VTN)

Valentine, located near the northern edge of the Sandhills and cattle country of Nebraska, is near the extreme northern border of the state. The city lies in the valley of the Niobrara River, a branch of the Missouri River, about 160 miles above the junction with the Missouri. It is the county seat of Cherry County and had its beginning in the fall of 1882. The name, Valentine, was selected for the new town in honor of Congressman E. K. Valentine, who represented the Third Congressional District of which Cherry County was a part.

The inland location offers a wide variety of weather. The high afternoon temperatures during the two warmest months, July and August, average nearly 90 degrees and the corresponding humidity averages about 40 percent. Uncomfortably warm nights are few with low morning temperatures averaging about 60 degrees. The temperature seldom reaches 100 degrees or more during the summer. The two coldest months are January and February. The minimum temperature generally reaches -20 degrees or colder once each winter.

Valentines location frequently places it in the path of cold Canadian air mass outbreaks during the cold season, alternating with mild, dry air moving across the Rockies from the Pacific. One or two bitterly cold days usually occur each winter when the temperature will stay below zero throughout the day. Blizzards are not frequent, but at least one is likely each winter season. An occasional severe blizzard occurs about once in every three or four winters. Blowing and drifting

snow reduce visibility to zero and bring outdoor activities and travel to a complete stop. Lives may be lost for anyone caught away from shelter, and there is usually loss of livestock which varies with the intensity and duration of the storm. Temperatures below 32 degrees have occurred as late as mid-June and as early as early September, and low temperature records in the 30s have occurred during the summer with light frost in low places. However, these are rare occurrences and temperatures below 50 degrees are not common in July and August.

About 65 percent of the annual precipitation falls during the growing season, May through September, and is predominantly the nighttime thunderstorm type with June being the wettest month.

The spring and fall seasons have mostly pleasant days, with the fall season having the most uniform character with lighter winds and gradually falling temperatures as the season progresses. In the spring the weather is windy and extremely variable, with summer-like days mixed with some of cold of winter. The widest extremes of temperature occur in March.

Some of the damaging weather elements other than blizzards, are high winds, which dig blow outs in the sand hills, and an occasional hailstorm. Damage from hail is not extensive and confined mostly to buildings and gardens since the area is mostly prairie. Floods are unknown. Tornadoes occasionally occur but seldom do much damage because ranches and towns are widely scattered.

# STATION LOCATION

VALENTINE, NEBRASKA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE  M = AMOS T = AUTOB S = ASOS W = AWOS  REMARKS
						GROUND											
						SEA LEVEL	GROUND	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	RAINING GAUGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROMETER		
*NOTES:  <u>AIRPORT</u>  Municipal Airport Miller Field  Miller Field	8/10/55  10/01/95	10/01/95  Present	1 mi. S  NA	42°52'  42°52'	100°33'  100°33'	2587  n2586	30 M21	5  5	5  14	NA M5	5  4	NA M5	M  S	M - Commissioned 3/15/76.  ASOS Commissioned 10/01/95 n. Ground Elevation			

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\* NOTES: For earlier station history see previous edition.