

1998

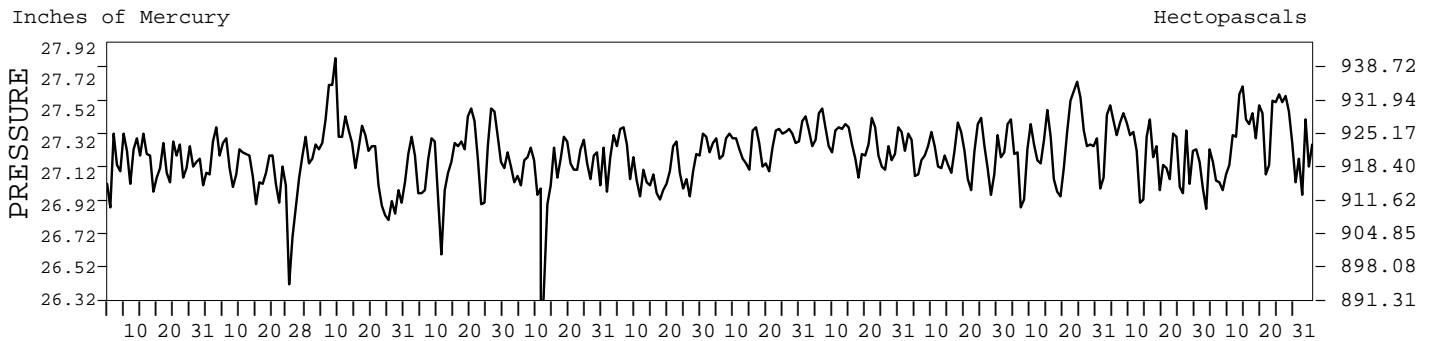
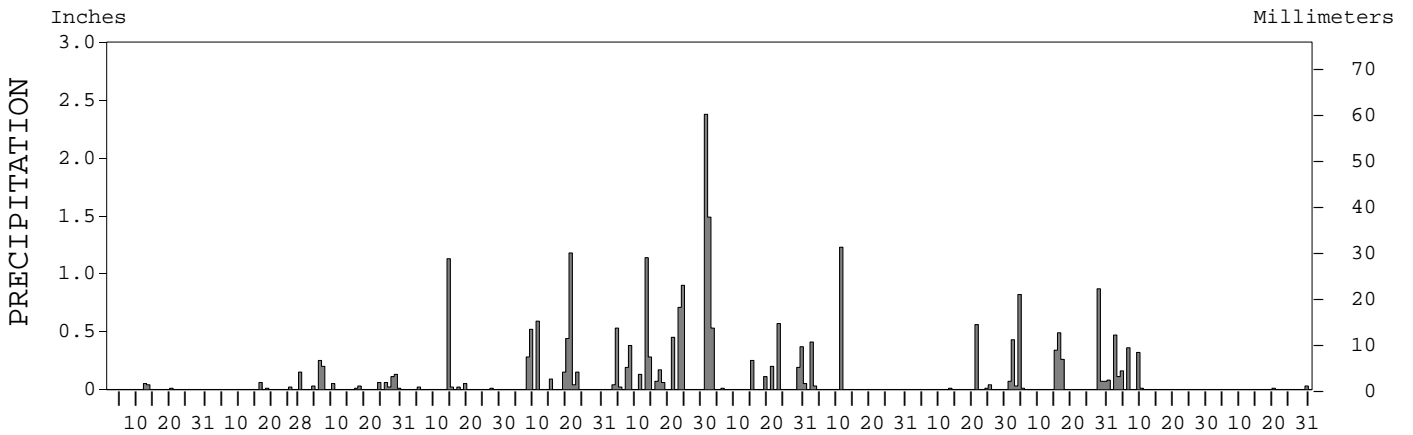
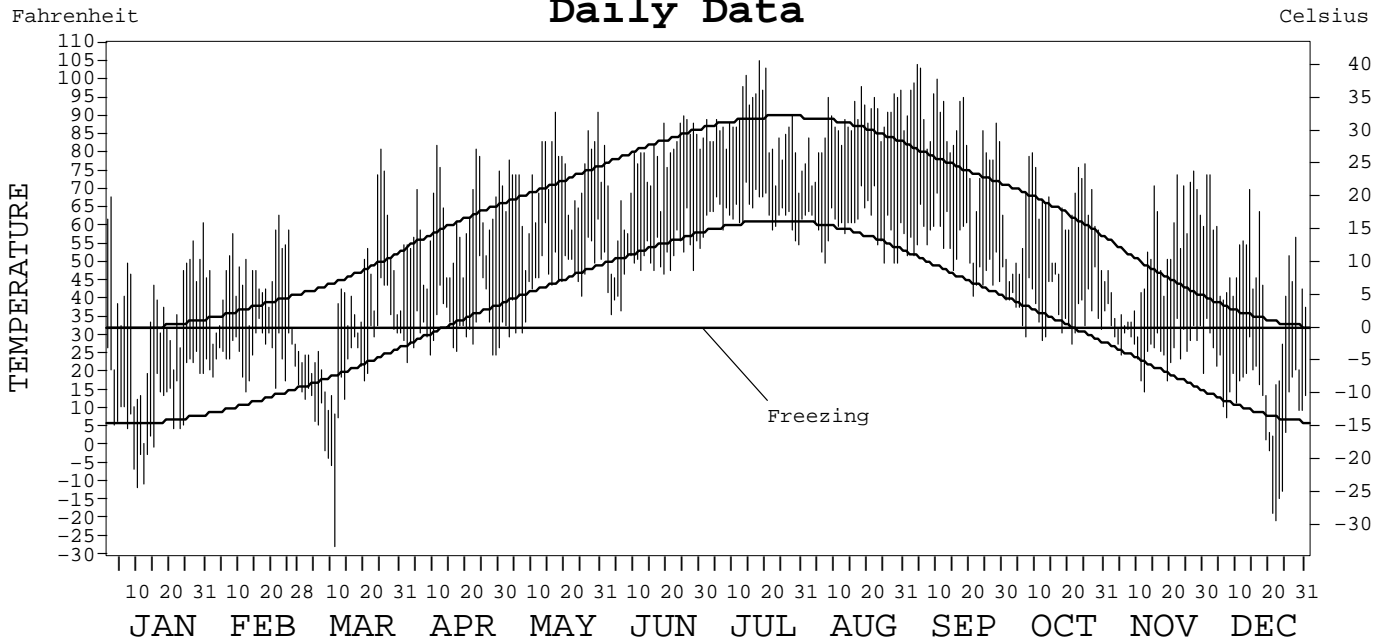
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-3245

VALENTINE,
NEBRASKA (VTN)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1998

VALENTINE, NE (VTN)

LATITUDE: 42° 51' 31" N LONGITUDE: 100° 33' 05" W ELEVATION (FT): GRND: 2587 BARO: 2590 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	37.4	44.3	37.5	60.6	73.0	75.1	87.1	87.6	84.8	61.1	51.1	43.1	61.9	
	HIGHEST DAILY MAXIMUM	68	63	81	82	91	90	105	98	104	80	75	74	105	
	DATE OF OCCURRENCE	02	22	25	11	30+	25	18	18	04	09	27	02+	JUL 18	
	MEAN DAILY MINIMUM	11.1	24.9	19.8	32.6	45.5	50.2	63.4	60.0	53.8	37.4	27.5	12.8	36.6	
	LOWEST DAILY MINIMUM	-11	15	-27	23	30	36	55	50	41	28	15	-20	-27	
	DATE OF OCCURRENCE	10	12	11	02	03	03	30	29+	21	21	12	22	MAR 11	
	AVERAGE DRY BULB	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	
	MEAN WET BULB	21.6	31.2	26.5	40.1		56.5	67.0	65.3	58.3	44.6	33.8	22.6		
	MEAN DEW POINT	16.6	27.5	22.7	31.9		52.2	62.3	60.6	50.8	39.9	28.1	14.8		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	2	1	9	13	11	0	0	0	0	36
	MAXIMUM ≤ 32°	11	5	12	0	0	0	0	0	0	0	2	7	7	37
	MINIMUM ≤ 32°	31	27	25	16	3	0	0	0	0	7	25	30	30	164
MINIMUM ≤ 0°	6	0	4	0	0	0	0	0	0	0	0	5	5	15	
H/C	HEATING DEGREE DAYS	1256	844	1118	546	211	124	3	0	52	480	764	1140	6538	
	COOLING DEGREE DAYS	0	0	0	1	42	61	331	282	189	0	0	0	906	
RH	MEAN (PERCENT)	76	80	80	62	64	72	68	68	57	75	72	65	70	
	HOUR 06 LST	84	90	88	82	85	90	87	90	81	91	84	77	86	
	HOUR 12 LST	66	73	73	46	52	57	53	50	42	59	57	49	56	
	HOUR 18 LST	70	69	70	42	45	56	50	48	39	63	65	56	56	
	HOUR 24 LST	82	87	86	75	76	87	81	81	68	86	81	74	80	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	3	0	0	0	3	3	2	1	1	3	0	18	
	THUNDERSTORMS	0	0	2	0	10	9	9	11	2	6	0	0	49	
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.)	27.20	27.12	27.26	27.22		27.16	27.32	27.33	27.25	27.31	27.24	27.35		
	MEAN SEA-LEVEL PRESS. (IN.)	30.00	29.88	30.06	29.94		29.84	29.97	29.99	29.91	30.04	30.00	30.17		
WINDS	RESULTANT SPEED (MPH)	2.3	2.8	3.1	3.2		1.7	2.7	3.2	3.3	1.2	3.4	5.6		
	RES. DIR. (TENS OF DEGS.)	28	25	36	33		33	11	14	20	28	26	28		
	MEAN SPEED (MPH)	8.1	11.7	10.7	11.0	10.0	10.1	8.6	8.6	9.8	9.4	10.2	9.8	9.8	
	PREVAIL. DIR. (TENS OF DEGS.)	24	32	34	34	30	30	16	16	20	29	24	24	29	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	40	37	39	39	38	46	34	29	33	45	38	46	
	DIR. (TENS OF DEGS.)	33	32	01	18	28	27	34	23	17	29	30	33	34	
	DATE OF OCCURRENCE	28+	28	31+	12	11	01	18	11	09	05	10	30	JUL 18	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	33	52	48	47	49	46	70	48	36	41	54	46	70	
DIR. (TENS OF DEGS.)	33	32	22	17	26	30	34	25	16	30	31	33	34		
DATE OF OCCURRENCE	28+	28	25	12	11	01	18	11	09	05	10	30	JUL 18		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	0.05	0.15	0.25	1.15	1.18	1.14	3.87	1.23	0.56	0.94	0.47	0.03	3.87	
	DATE OF OCCURRENCE	12	28	06	14-15	21	13	01-02	11	21	28-29	02	30	JUL 01-02	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	3	4	12	6	9	14	11	3	4	12	6	2	86	
PRECIPITATION ≥ 0.10	0	1	4	1	7	10	9	2	1	6	5	0	46		
PRECIPITATION ≥ 1.00	0	0	0	1	1	1	2	1	0	0	0	0	6		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	2.5	2.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	2.5		
	GREATEST 24-HOUR (IN.)	2.0	2.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.5		
	DATE OF OCCURRENCE	12	28									06	30		
	MAXIMUM SNOW DEPTH (IN.)	3	2	8	0	0	0	0	0	0	0	4	3	8	
	DATE OF OCCURRENCE	14+	28	08								10+	30	MAR 08	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	1	1		0	0	0	0	0	0	0	5	2			

NORMALS, MEANS, AND EXTREMES

VALENTINE, NE (VTN)

LATITUDE: 42° 51' 31" N LONGITUDE: 100° 33' 05" W ELEVATION (FT): GRND: 2587 BARO: 2590 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	32.6	37.8	46.5	60.0	71.1	81.9	88.9	86.6	76.1	64.1	47.3	35.2	60.7
	MEAN DAILY MAXIMUM	37	32.8	38.2	47.0	59.8	71.1	81.4	88.4	86.4	76.7	63.7	46.3	35.8	60.6
	HIGHEST DAILY MAXIMUM	44	72	78	85	100	99	110	114	108	104	96	82	74	114
	YEAR OF OCCURRENCE		1987	1982	1993	1992	1989	1988	1990	1965	1998	1993	1965	1998	JUL 1990
	MEAN OF EXTREME MAXS.	37	58.6	62.8	75.2	85.3	91.3	98.6	103.5	101.5	96.7	86.6	71.7	61.0	82.7
	NORMAL DAILY MINIMUM	30	6.6	11.9	20.9	32.9	44.1	54.0	60.4	57.6	46.3	33.9	20.8	9.3	33.2
	MEAN DAILY MINIMUM	37	6.9	12.7	21.0	32.9	44.0	53.9	60.0	57.7	46.9	33.8	20.8	10.3	33.4
	LOWEST DAILY MINIMUM	44	-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.	37	-16.0	-12.3	-3.7	15.8	27.9	40.6	47.4	44.0	29.5	16.5	0.2	-14.3	14.6
	NORMAL DRY BULB	30	19.6	24.9	33.7	46.5	57.6	68.0	74.7	72.1	61.2	49.0	34.1	22.3	47.0
	MEAN DRY BULB	37	19.8	25.5	34.0	46.3	57.5	67.7	74.1	72.1	61.8	48.7	33.6	23.0	47.0
	MEAN WET BULB	15	18.2	22.9	30.2	38.9	50.1	58.5	58.4	61.8	52.0	40.8	28.1	20.5	40.0
	MEAN DEW POINT	15	12.4	15.8	22.6	29.9	42.3	51.6	51.9	55.4	43.9	32.2	21.3	13.5	32.7
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.4	1.5	7.1	15.4	12.9	5.1	0.4	0.0	0.0	42.8	
MAXIMUM ≤ 32°	30	13.9	10.2	5.8	0.5	0.0	0.0	0.0	0.0	0.0	0.3	5.0	12.9	48.6	
MINIMUM ≤ 32°	30	30.8	27.6	27.2	14.4	2.5	0.1	0.0	0.0	1.9	13.6	26.9	30.8	175.8	
MINIMUM ≤ 0°	30	10.4	5.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.2	26.5	
H/C	NORMAL HEATING DEG. DAYS	30	1407	1123	970	555	248	49	0	16	167	496	927	1324	7282
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	19	139	305	236	53	0	0	0	752
RH	NORMAL (PERCENT)	30	64	64	63	55	57	56	55	58	54	57	62	64	59
	HOUR 06 LST	30	69	71	71	64	68	66	64	68	64	67	69	69	68
	HOUR 12 LST	30	70	73	76	73	75	75	74	76	73	73	72	71	73
	HOUR 18 LST	30	57	57	53	43	44	43	43	45	42	44	51	56	48
	HOUR 24 LST	30	60	56	49	41	43	40	39	41	38	44	56	60	47
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)	13	0.7	1.2	0.8	0.9	0.5	0.5	0.7	0.7	0.4	0.6	0.4	0.6	8.0
	THUNDERSTORMS	13	0.0	0.0	0.3	1.3	6.7	9.1	10.2	8.2	3.1	1.0	0.2	0.0	40.1
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)	9	27.32	27.30	27.22	27.24	27.21	27.22	27.30	27.29	27.28	27.29	27.29	27.23	27.27
	MEAN SEA-LEVEL PRES. (IN)	14	30.11	30.10	30.02	29.94	29.91	29.88	29.91	29.94	29.98	30.01	30.04	30.11	30.00
WINDS	MEAN SPEED (MPH)	15	9.0	8.9	10.0	10.4	10.3	9.6	8.9	8.3	9.6	9.1	9.1	8.9	9.3
	PREVAIL. DIR (TENS OF DEGS)	15	32	32	34	34	17	16	16	17	18	30	30	29	32
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	43	52	43	49	39	39	46	53	38	45	45	41	53
	DIR. (TENS OF DEGS)		32	30	33	30	28	25	34	20	30	32	30	31	20
	YEAR OF OCCURRENCE		1996	1996	1996	1996	1998	1996	1998	1996	1996	1996	1998	1996	AUG 1996
	MAXIMUM 5-SECOND:														
SPEED (MPH)	3	53	63	52	61	49	46	70	60	51	55	54	51	70	
DIR. (TENS OF DEGS)		33	30	33	31	26	30	34	20	32	32	31	30	34	
YEAR OF OCCURRENCE		1996	1996	1996	1997	1998	1998	1998	1996	1996	1996	1998	1996	JUL 1998	
PRECIPITATION	NORMAL (IN)	30	0.29	0.43	1.04	1.67	3.16	2.89	3.06	2.28	1.53	0.91	0.60	0.37	18.23
	MAXIMUM MONTHLY (IN)	43	0.82	1.43	4.23	4.01	8.96	7.09	8.96	6.71	5.91	3.97	2.62	1.81	8.96
	YEAR OF OCCURRENCE		1979	1962	1977	1968	1962	1983	1983	1966	1973	1995	1985	1987	JUL 1983
	MINIMUM MONTHLY (IN)	43	T	0.01	0.01	0.25	0.45	0.44	0.28	0.37	0.11	T	0.01	T	T
	YEAR OF OCCURRENCE		1961	1957	1997	1967	1966	1976	1980	1969	1958	1958	1962	1991	DEC 1991
	MAXIMUM IN 24 HOURS (IN)	43	0.66	0.84	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	1987	1977	1971	1962	1992	1998	1971	1973	1997	1985	1987	JUL 1998
NORMAL NO. DAYS WITH:															
PRECIPITATION ≥ 0.01	30	5.0	4.7	6.8	8.4	10.3	9.8	9.5	8.1	6.6	4.6	4.7	5.1	83.6	
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.1	0.1	0.6	0.6	0.7	0.5	0.2	*	0.1	*	2.9	
SNOWFALL	NORMAL (IN)	30	4.8	5.2	8.5	3.7	0.1	0.0	0.0	0.0	0.7	1.1	5.3	5.5	34.9
	MAXIMUM MONTHLY (IN)	41	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)	41	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)	36	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	1.6	1.8	2.4	0.9	0.*	0.0	0.0	0.0	0.*	0.5	1.6	1.8	10.6	

PRECIPITATION (inches) 1998 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0.33	0.64	0.51	0.89	0.68	2.02	2.42	0.37	0.63	1.87	0.10	0.27	10.73
1970	0.02	0.11	0.64	2.80	2.26	2.40	2.64	0.59	0.71	1.11	0.26	0.28	13.82
1971	0.49	0.67	0.51	3.26	2.99	1.46	1.60	3.45	0.97	1.76	0.33	0.27	17.76
1972	0.41	0.13	0.34	2.32	3.64	2.55	4.63	1.00	0.46	0.63	1.37	0.32	17.80
1973	0.69	0.23	2.28	2.10	3.51	0.95	2.81	1.93	5.91	1.60	1.12	0.13	23.26
1974	0.13	0.21	0.55	1.30	2.57	1.26	1.26	1.51	0.74	0.84	0.19	0.01	10.57
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
POR= 110 YRS	0.43	0.51	1.09	2.00	2.87	3.11	2.73	2.26	1.32	1.04	0.51	0.40	18.27

WBAN : 24032

AVERAGE TEMPERATURE (°F) 1998 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	12.7	22.4	23.5	51.3	60.1	62.4	74.5	75.6	66.7	42.3	38.5	26.1	46.3
1970	17.0	29.4	27.6	42.6	60.7	69.2	75.8	74.9	61.6	45.1	34.4	21.1	46.6
1971	16.6	20.3	32.4	47.8	55.5	71.3	70.9	75.4	60.2	49.0	36.1	24.4	46.7
1972	16.5	24.0	38.0	45.4	58.3	67.7	70.3	71.0	61.4	45.6	29.6	17.1	45.4
1973	21.2	28.6	39.6	45.0	55.8	68.4	73.8	76.8	57.7	52.7	34.8	23.8	48.2
1974	19.3	30.2	37.2	47.9	57.3	67.5	79.1	69.0	57.9	52.0	35.5	27.3	48.4
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
POR= 110 YRS	20.7	24.2	33.2	46.2	57.0	67.3	74.1	72.0	62.0	49.5	34.4	24.6	47.1

HEATING DEGREE DAYS (base 65°F) 1998 VALENTINE, NE (VTN)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0	8	46	696	787	1198	1482	991	1152	665	172	47	7244
1970-71	1	0	204	611	910	1353	1494	1244	1002	508	291	7	7625
1971-72	25	0	215	492	861	1251	1500	1180	827	584	257	43	7235
1972-73	30	38	165	596	1056	1483	1356	1013	779	592	297	28	7433
1973-74	7	0	236	376	899	1270	1413	970	855	510	243	65	6844
1974-75	0	39	233	400	876	1163	1256	1284	1126	642	236	67	7322
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-	3	0	52	480	764	1140							

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COOLING DEGREE DAYS (base 65°F) 1998 VALENTINE, NE (VTN)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	0	80	61	301	343	104	0	0	0	889
1970	0	0	0	0	49	181	341	315	108	0	0	0	994
1971	0	0	0	0	4	201	214	330	78	0	0	0	827
1972	0	0	0	0	56	132	202	231	63	0	0	0	684
1973	0	0	0	0	18	136	285	373	24	1	0	0	837
1974	0	0	0	4	13	144	446	171	25	3	0	0	806
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

SNOWFALL (inches) 1998 VALENTINE, NE (VTN)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	4.7	0.9	3.3	0.9	2.2	10.1	16.1	0.0	0.0	38.2
1970-71	0.0	0.0	0.0	2.9	1.9	4.2	9.3	9.3	8.0	7.7	0.0	0.0	43.3
1971-72	0.0	0.0	0.0	4.7	1.0	3.7	5.7	2.0	0.4	0.4	T	0.0	17.9
1972-73	0.0	0.0	0.0	2.6	12.0	7.6	9.2	2.6	1.1	0.4	T	0.0	35.5
1973-74	0.0	0.0	T	T	13.3	3.0	2.5	3.0	4.1	0.5	0.0	0.0	26.4
1974-75	0.0	0.0	0.0	0.0	1.5	0.2	5.8	5.7	16.1	3.1	0.0	0.0	32.4
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-	0.0	0.0	0.0	0.0	12.0	2.5							
POR= 42 YRS	0.0	T	0.5	1.4	5.1	4.5	4.4	5.4	7.1	4.5	0.3	T	33.2

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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 (1961 - 1990). 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 EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1998
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										AUGUST 1951	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS	
						SEA LEVEL	GROUND												
							WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND				WIND
<u>CITY</u>																			
Cornell Hall Third & Main Streets	4/21/85	4/01/87		42°53'	100°33'														
Shaw's Building	4/01/87	10/28/88		42°53'	100°33'			23	23			31		31				Destroyed by fire on 10/11/88.	
Allen's Building	10/28/88	1/01/91		42°53'	100°33'			41	41			31		31					
Watson's Block 22 Main Street	1/01/91	11/10/93		42°53'	100°33'		40	38	38			24		24					
Watson's Block	11/10/93	9/24/97		42°53'	100°33'		39	37	37			27		27					
Davenport Building Second & Main Street	7/24/97	7/02/02		42°53'	100°33'		40		39			30		30					
Fraternal Hall Building 219 North Main Street	7/02/02	8/01/55	125 ft. N	42°53'	100°33'	2581	54	47	46			36	36	35					
<u>AIRPORT</u>																			
Municipal Airport Miller Field	8/10/55	Present	1 mi. S	42°52'	100°33'	2587	30 M21	5	5	14		NA M5	5	4	NA M5	M S	M - Commissioned 3/15/76. ASOS Commissioned 10/01/95		

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