

2004

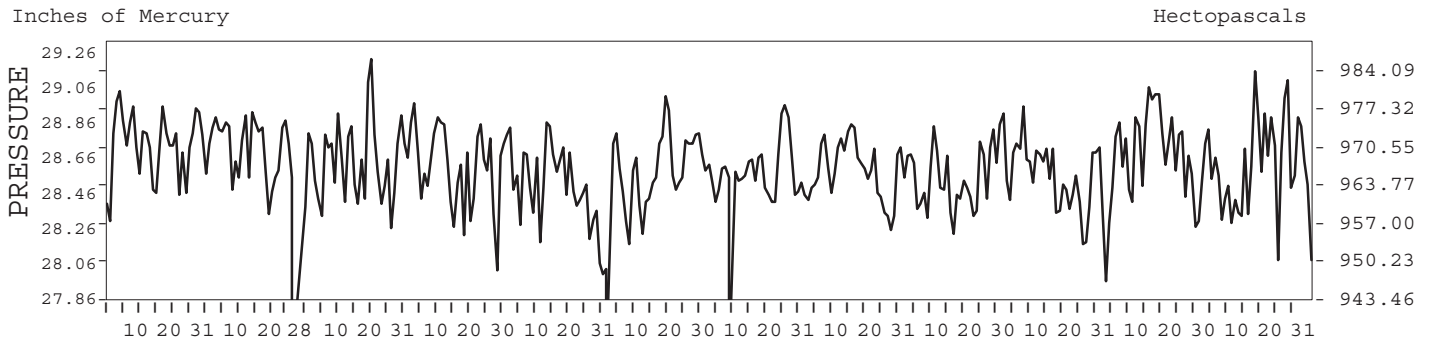
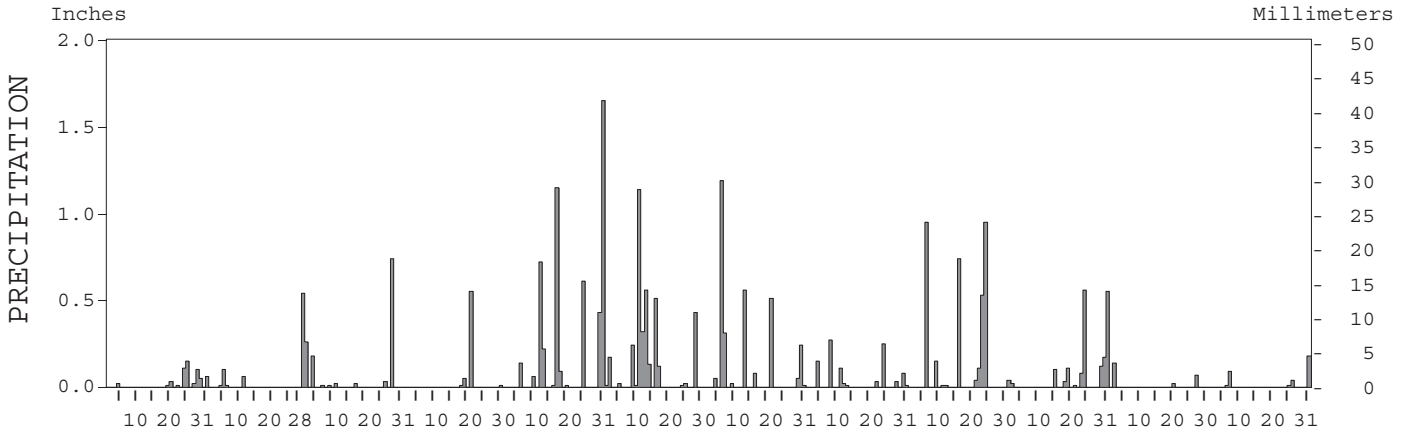
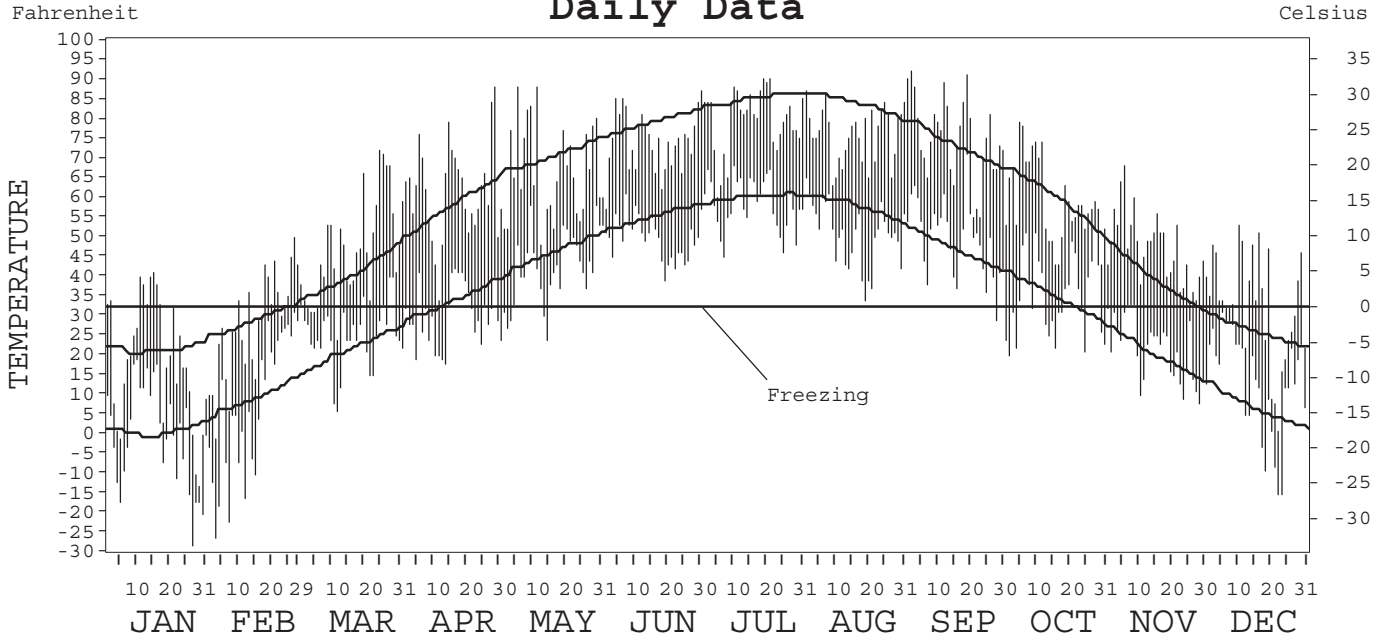
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-4683

## ABERDEEN, SOUTH DAKOTA (ABR)

### Daily Data



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# METEOROLOGICAL DATA FOR 2004

## ABERDEEN, SD (ABR)

LATITUDE: 45° 26' 59" N      LONGITUDE: 98° 25' 17" W      ELEVATION (FT.): GRND: 1303      BARO: 1306      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 14929

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	18.8	28.1	47.2	61.4	66.2	74.1	79.6	76.0	74.9	59.1	47.2	32.5	55.4	
	HIGHEST DAILY MAXIMUM	41	50	72	88	88	87	90	87	92	79	68	53	92	
	DATE OF OCCURRENCE	15	27	24	28	11+	30	21+	01	02	05	06	11	SEP 02	
	MEAN DAILY MINIMUM	-1.1	8.0	24.8	30.2	42.4	49.7	58.1	50.7	49.4	35.2	21.6	13.2	31.9	
	LOWEST DAILY MINIMUM	-28	-26	6	18	24	39	45	34	29	20	8	-15	-28	
	DATE OF OCCURRENCE	27	03	11	13	14	19	07	19	28	02	29	24+	JAN 27	
	AVERAGE DRY BULB	9.4	18.1	36.0	45.8	54.3	61.9	68.9	63.4	62.2	47.2	34.4	22.9	43.7	
	MEAN WET BULB	8.7		32.1	38.8	48.2			58.0	56.8	43.4	30.5	21.3		
	MEAN DEW POINT	3.3		26.4	28.9	41.7			53.7	52.8	38.5	24.9	16.3		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	2	0	3	0	0	0	0	5
	MAXIMUM ≤ 32°	22	17	5	0	0	0	0	0	0	0	0	14	58	
	MINIMUM ≤ 32°	31	28	27	20	5	0	0	0	1	15	27	31	185	
MINIMUM ≤ 0°	16	10	0	0	0	0	0	0	0	0	0	5	31		
H/C	HEATING DEGREE DAYS	1721	1353	892	570	337	115	37	99	157	544	911	1299	8035	
	COOLING DEGREE DAYS	0	0	0	0	13	29	164	57	78	0	0	0	341	
RH	MEAN (PERCENT)	75	80	71	56	66	68	75	72	74	74	72	75	72	
	HOUR 00 LST	78	83	77	68	74	82	87	86	82	82	81	78	80	
	HOUR 06 LST	79	83	84	80	84	88	91	90	88	86	84	81	85	
	HOUR 12 LST	71	76	63	40	57	52	63	56	59	62	59	71	61	
	HOUR 18 LST	72	78	58	34	50	49	57	56	63	66	68	73	60	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	2	2	1	0	3	4	2	5	3	0	1	24	
	THUNDERSTORMS	0	0	1	1	4	5	4	5	2	0	0	0	22	
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.)	28.73		28.64	28.61	28.49			28.60	28.54	28.52	28.71	28.61		
	MEAN SEA-LEVEL PRESS. (IN.)	30.20		30.06	30.01	29.87			29.97	29.92	29.92	30.13	30.05		
WINDS	RESULTANT SPEED (MPH)	2.9		3.3	3.2	1.8			0.3	3.3	0.8		2.4		
	RES. DIR. (TENS OF DEGS.)	34		31	02	05			15	16	20		31		
	MEAN SPEED (MPH)	10.1	11.1	12.9	11.0	12.9	9.7	8.2	9.3	10.9	11.6	9.2	11.3	10.7	
	PREVAIL. DIR. (TENS OF DEGS.)	03	17	33	01	16	24	17	05	17	17	17	17	17	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	41	37	48	41	43	32	46	39	36	37	32	46	48	
	DIR. (TENS OF DEGS.)	33	17	31	34	31	17	30	31	18	33	33	32	31	
	DATE OF OCCURRENCE	14	27	10	07	11	07	20	07	19	30+	22	12	MAR 10	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	48	47	59	49	58	43	56	46	47	45	36	59	59	
DIR. (TENS OF DEGS.)	33	17	17	34	28	17	29	32	16	32	33	31	31		
DATE OF OCCURRENCE	14	27	27+	07	11	07	20	07	20+	30	22+	12	DEC 12		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.56	0.72	1.27	0.62	5.10	3.68	3.02	0.96	3.53	1.75	0.23	0.33	21.77	
	GREATEST 24-HOUR (IN.)	0.20	0.54	0.74	0.55	2.05	1.46	1.48	0.27	0.95	0.72	0.14	0.18	2.05	
	DATE OF OCCURRENCE	24-25	29	27	20	29-30	10-11	05-06	07	23+	29-30	01	30	MAY 29-30	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	10	5	8	4	12	13	10	10	10	10	3	5	100	
PRECIPITATION ≥ 0.10	3	2	3	1	7	9	5	4	6	6	1	1	48		
PRECIPITATION ≥ 1.00	0	0	0	0	2	1	1	0	0	0	0	0	4		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	10.5	3.6	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	T	1.5	19.8	
	GREATEST 24-HOUR (IN.)	2.7	2.0	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	T	0.7	2.7	
	DATE OF OCCURRENCE	25	05	03	29							26	25	JAN 25	
	MAXIMUM SNOW DEPTH (IN.)	7	7	1	T	0	0	0	0	0	0	0	1	7	
	DATE OF OCCURRENCE	29	08+	04+	29							06	06	FEB 08+	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	5	2	2	0	0	0	0	0	0	0	0	0	9		

# NORMALS, MEANS, AND EXTREMES

## ABERDEEN, SD (ABR)

LATITUDE: 45° 26' 59" N      LONGITUDE: 98° 25' 17" W      ELEVATION (FT): GRND: 1303      BARO: 1306      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 14929

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	21.4	28.5	40.2	57.4	70.2	78.7	84.7	83.5	73.0	59.2	38.8	25.7	55.1
	MEAN DAILY MAXIMUM	47	21.1	27.2	39.3	56.8	69.0	78.2	84.7	83.6	73.0	59.7	40.0	26.8	55.0
	HIGHEST DAILY MAXIMUM	43	60	62	82	98	96	108	110	112	103	96	78	62	112
	YEAR OF OCCURRENCE		1981	2000	1963	1992	1992	1988	1966	1965	1970	1963	1975	1969	AUG 1965
	MEAN OF EXTREME MAXS.	57	43.6	48.4	63.0	81.1	87.9	93.4	98.3	97.4	92.5	81.9	63.9	46.7	74.8
	NORMAL DAILY MINIMUM	30	.6	8.8	21.2	33.4	45.6	54.8	59.7	57.4	46.5	34.4	19.7	6.3	32.4
	MEAN DAILY MINIMUM	47	.0	6.6	19.4	32.5	44.4	54.4	59.4	56.9	46.0	34.0	19.5	6.8	31.7
	LOWEST DAILY MINIMUM	43	-35	-45	-32	-2	19	33	39	32	20	8	-27	-39	-45
	YEAR OF OCCURRENCE		1972	1994	1995	1975	1961	1964	1971	1987	1995	1991	1964	1967	FEB 1994
	MEAN OF EXTREME MINS.	57	-25.2	-18.6	-5.5	16.5	28.3	40.8	46.6	42.3	29.2	17.4	-.9	-17.1	12.8
	NORMAL DRY BULB	30	11.0	18.7	30.7	45.4	57.9	66.8	72.2	70.5	59.8	46.8	29.3	16.0	43.8
	MEAN DRY BULB	57	10.2	17.6	28.9	44.8	56.8	66.3	72.0	70.0	59.5	46.8	30.0	16.3	43.3
	MEAN WET BULB	53	9.3	16.8	26.2	39.1	50.0	59.6	64.5	62.1	52.4	41.5	27.5	15.6	38.7
	MEAN DEW POINT	53	3.1	11.4	20.8	32.2	43.2	54.7	59.7	57.1	46.6	35.4	22.3	10.4	33.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.2	0.4	2.7	8.3	6.7	2.1	0.1	0.0	0.0	20.5	
MAXIMUM ≤ 32°	30	23.0	15.9	8.4	0.6	0.0	0.0	0.0	0.0	0.0	0.3	9.7	20.3	78.2	
MINIMUM ≤ 32°	30	30.9	27.5	26.4	14.5	2.2	0.0	0.0	*	2.1	13.1	27.4	30.9	175.0	
MINIMUM ≤ 0°	30	15.2	8.9	2.5	*	0.0	0.0	0.0	0.0	0.0	0.0	2.1	10.2	38.9	
H/C	NORMAL HEATING DEG. DAYS	30	1678	1312	1072	591	251	59	11	27	206	569	1066	1506	8348
	NORMAL COOLING DEG. DAYS	30	0	0	0	3	29	112	235	196	49	2	0	0	626
RH	NORMAL (PERCENT)	30	77	78	75	64	64	68					77	78	
	HOUR 00 LST	30	78	81	82	77	76	80					82	81	
	HOUR 06 LST	30	79	81	84	82	82	86	88	89	86	82	83	82	84
	HOUR 12 LST	30	72	72	68	54	52	57	55	54	53	56	69	73	61
	HOUR 18 LST	30	75	73	66	50	48	53	51	49	51	57	72	77	60
S	PERCENT POSSIBLE SUNSHINE	5	39	46	65	55	57	66	65	66	62	42	36	35	53
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	24	2.5	2.5	2.8	1.2	0.7	1.1	1.2	1.0	1.3	1.4	2.3	2.9	20.9
	THUNDERSTORMS	24	0.0	0.2	0.5	1.8	4.0	8.0	8.3	6.1	3.1	1.1	0.1	0.0	33.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1			6.4			4.0							
	MIDNIGHT-MIDNIGHT (OKTAS)	1			6.4										
	MEAN NO. DAYS WITH:														
	CLEAR	1	2.0	3.0	9.0		2.0	9.0	3.0	4.0	5.0	2.0		2.0	
PARTLY CLOUDY	1	1.0	1.0	4.0			8.0	1.0	3.0		3.0	1.0	1.0		
CLOUDY	1	2.5	3.0	11.0		13.0	3.0		3.0	2.0	9.0	4.0	12.0		
PR	MEAN STATION PRESSURE (IN)	16	28.66	28.65	28.62	28.57	28.53	28.51	28.56	28.58	28.59	28.60	28.63	28.64	28.60
	MEAN SEA-LEVEL PRES. (IN)	54	30.15	30.11	30.03	29.97	29.92	29.88	29.93	29.94	29.98	30.02	30.05	30.08	30.00
WINDS	MEAN SPEED (MPH)	23	12.0	12.0	12.9	13.6	12.8	11.3	9.8	10.1	10.9	11.5	11.8	11.4	11.7
	PREVAIL. DIR (TENS OF DEGS)	17	18	18	36	36	18	18	16	16	16	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	10	45	47	48	55	43	47	63	40	37	49	46	46	63
	DIR. (TENS OF DEGS)		33	30	31	31	31	01	31	34	33	33	34	32	31
	YEAR OF OCCURRENCE		2000	2002	2004	2000	2004	1998	2002	2000	1997	1996	1997	2004	JUL 2002
	MAXIMUM 5-SECOND:														
SPEED (MPH)	10	61	66	59	64	58	59	72	52	47	60	56	59	72	
DIR. (TENS OF DEGS)		35	33	17	30	28	01	33	33	16	33	34	31	33	
YEAR OF OCCURRENCE		1996	1996	2004	2000	2004	1998	2002	2000	2004	1996	1997	2004	JUL 2002	
PRECIPITATION	NORMAL (IN)	30	0.48	0.48	1.34	1.83	2.69	3.49	2.92	2.42	1.81	1.63	0.75	0.38	20.22
	MAXIMUM MONTHLY (IN)	73	2.23	2.06	3.45	7.88	7.36	8.88	7.71	6.62	5.32	7.29	2.87	1.86	8.88
	YEAR OF OCCURRENCE		1937	1952	1977	1986	1991	1939	1972	1942	1996	1998	2000	1935	JUN 1939
	MINIMUM MONTHLY (IN)	73	0.01	0.00	0.04	0.13	0.28	0.37	0.30	0.06	0.05	0.00	T	T	0.00
	YEAR OF OCCURRENCE		1961	1932	1971	1988	1948	1974	1975	1947	1979	1952	1980	1986	OCT 1952
	MAXIMUM IN 24 HOURS (IN)	73	1.12	1.02	3.00	2.28	3.81	5.20	3.46	3.50	3.49	3.75	1.30	0.91	5.20
	YEAR OF OCCURRENCE		1939	1958	1937	1938	1949	1978	1983	1990	1988	2000	1977	1988	JUN 1978
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.0	6.6	7.4	8.2	9.9	10.4	9.7	8.1	6.4	6.0	7.0	6.3	92.0	
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.2	0.2	0.4	0.8	0.6	0.5	0.5	0.5	*	0.0	3.7	
SNOWFALL	NORMAL (IN)	30	7.3	6.4	8.0	2.7	0.*	0.0	0.0	0.0	0.*	0.8	7.6	5.8	38.6
	MAXIMUM MONTHLY (IN)	73	26.2	25.1	27.9	24.4	2.0	T	T	T	0.2	5.5	30.5	18.5	30.5
	YEAR OF OCCURRENCE		1937	1969	1975	1970	1943	1993	1994	1993	1995	1970	2000	1935	NOV 2000
	MAXIMUM IN 24 HOURS (IN)	73	10.8	14.3	13.0	15.0	2.0	T	T	T	0.2	5.0	12.6	9.1	15.0
	YEAR OF OCCURRENCE		1997	1951	1937	1970	1943	1993	1994	1993	1995	1932	1993	1988	APR 1970
	MAXIMUM SNOW DEPTH (IN)	55	30	25	24	15	2	0	0	0	T	3	17	21	30
	YEAR OF OCCURRENCE		1997	1969	1969	1975	1954				1965	2002	1996	1996	JAN 1997
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	2.1	2.0	2.1	0.9	0.0	0.0	0.0	0.0	0.0	0.3	2.2	1.8	11.4	

PRECIPITATION (inches) 2004 ABERDEEN, SD (ABR)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0.82	0.29	2.71	2.60	2.26	5.28	0.30	1.50	1.73	1.23	0.29	0.30	19.31
1976	0.81	0.52	0.70	1.27	0.52	1.41	0.50	0.66	0.86	0.32	0.01	0.30	7.88
1977	0.34	0.91	3.45	0.90	2.82	1.99	2.16	2.48	4.36	1.24	2.36	0.83	23.84
1978	0.15	0.23	0.46	2.25	4.23	7.30	2.17	4.04	0.60	0.08	0.77	0.11	22.39
1979	1.01	0.73	1.60	2.93	1.93	4.99	2.56	1.24	0.05	1.18	0.02	0.14	18.38
1980	0.51	0.44	0.88	1.15	1.64	2.53	0.80	5.93	0.92	1.44	T	0.14	16.38
1981	0.12	0.20	2.00	0.12	1.60	2.10	3.97	2.91					
1982										5.14	0.59	0.09	
1983	0.16	0.26	2.65	0.69	1.66	3.47	6.46	2.21	1.55	0.81	0.60	0.55	21.07
1984	0.47	0.70	1.94	2.39	1.13	5.65	2.64	2.23	0.84	2.93	0.06	0.61	21.59
1985	0.23	0.08	1.82	0.63	3.41	1.76	2.38	2.71	2.71	0.87	1.60	0.57	18.77
1986	0.43	0.71	0.58	7.88	3.32	2.48	3.78	2.85	2.82	0.19	0.77	T	25.81
1987	0.09	1.12	1.91	0.41	2.01	0.77	2.13	1.87	1.33	0.20	0.79	0.09	12.72
1988	0.35	0.31	0.37	0.13	3.43	0.93	3.14	2.80	5.31	0.11	0.73	1.37	18.98
1989	0.52	0.37	1.46	3.42	1.20	2.05	2.00	3.83	2.23	0.58	0.74	0.15	18.55
1990	0.13	0.39	0.81	1.87	1.41	7.72	1.98	4.85	3.01	0.44	0.11	0.37	23.09
1991	0.11	0.70	0.77	3.70	7.36	4.76	1.32	2.28	0.57	1.06	0.32	0.13	23.08
1992	0.66	0.47	0.54	0.40	0.78	5.61	2.97	1.55	1.63	0.83	1.19	0.20	16.83
1993	0.61	0.49	0.42	1.51	3.11	6.20	7.37	4.42	1.21	0.35	1.88	0.56	28.13
1994	0.80	0.42	0.43	2.28	0.30	1.10	5.37	3.87	1.63	3.36	0.77	0.38	20.71
1995	0.62	0.50	2.34	2.26	5.98	1.34	3.51	2.36	1.50	3.16	0.20	0.47	24.24
1996	1.32	0.78	0.87	0.15	4.46	4.12	1.91	0.24	5.32	3.55	1.40	0.87	24.99
1997	1.34	0.88	0.79	2.01	1.72	2.65	1.41	3.75	0.82	3.37	0.46	0.18	19.38
1998	0.63	0.75	1.54	1.81	4.29	6.47	1.12	2.95	0.06	7.29	1.41	0.18	28.50
1999	0.62	0.21	0.92	1.76	2.97	5.23	2.80	3.19	4.27	0.15	T	0.15	22.27
2000	0.27	0.69	1.21	2.47	2.93	4.94	4.51	1.69	0.51	4.75	2.87	0.38	27.22
2001	0.28	1.01	0.30	3.43	2.67	3.31	4.81	0.79	2.61	1.96	1.39	0.06	22.62
2002	0.27	0.03	0.56	1.15	1.82	1.22	3.96	3.82	0.93	1.40	0.09	0.30	15.55
2003	0.24	0.45	0.57	2.01	4.33	6.94	1.98	1.59	1.26	0.88	0.70	0.33	21.28
2004	0.56	0.72	1.27	0.62	5.10	3.68	3.02	0.96	3.53	1.75	0.23	0.33	21.77
POR= 73 YRS	0.56	0.59	1.14	2.03	2.64	3.61	2.75	2.27	1.72	1.38	0.75	0.49	19.93

WBAN : 14929

AVERAGE TEMPERATURE (°F) 2004 ABERDEEN, SD (ABR)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	17.1	14.7	24.9	40.6	59.8	68.1	78.3	72.3	58.9	51.9	34.0	17.6	44.9
1976	12.0	26.8	30.5	49.7	57.0	69.9	75.0	75.9	62.1	43.0	26.5	14.6	45.3
1977	1.4	24.2	33.6	51.9	64.9	67.7	74.1	65.7	59.6	46.5	27.2	11.1	44.0
1978	-1.7	6.0	25.3	42.9	58.2	65.6	70.1	70.7	65.1	47.4	24.2	10.8	40.4
1979	-1.2	2.5	24.6	40.7	52.6	65.3	70.5	68.3	63.2	45.9	29.2	25.6	40.6
1980	13.0	14.7	25.6	49.9	59.5	67.0	72.9	68.9	59.5	45.3	36.2	20.0	44.4
1981	19.4	23.9	35.6	49.9	56.3	65.3	74.4	72.1					
1982										46.6	27.7	25.0	
1983	23.1	28.0	33.3	41.5	53.6	65.2	75.2	76.5	60.8	47.3	32.2	- .6	44.7
1984	15.7	30.3	27.9	47.0	54.4	65.6	71.3	72.7	55.4	48.6	32.5	13.0	44.5
1985	8.5	16.3	36.0	50.3	61.2	61.3	72.6	67.3	56.5	45.3	16.4	7.8	41.6
1986	17.3	12.1	35.8	44.1	57.6	68.0	72.5	66.2	56.7	47.3	26.3	24.2	44.0
1987	22.7	30.5	33.3	51.5	62.3	69.3	75.7	67.8	61.1	43.3	35.1	24.5	48.1
1988	9.9	14.6	33.0	45.4	63.5	75.0	76.4	72.9	59.2	44.4	29.1	18.8	45.2
1989	15.6	5.0	22.9	45.1	57.4	64.7	75.3	72.0	59.8	46.8	28.6	9.3	41.9
1990	25.3	21.3	35.8	44.0	54.9	66.2	69.7	70.9	63.6	45.8	34.7	12.2	45.4
1991	11.3	27.8	33.8	48.3	60.8	70.8	72.2	72.7	60.3	44.8	24.9	24.1	46.0
1992	21.6	28.8	36.2	44.1	59.5	63.7	64.3	64.3	58.5	46.2	29.6	14.7	44.3
1993	9.7	12.0	31.1	44.7	57.6	63.0	68.6	70.2	56.1	45.6	27.9	18.3	42.1
1994	0.4	7.5	33.5	46.4	63.5	70.3	69.3	65.7	61.5	49.5	32.8	16.5	43.1
1995	11.7	15.4	26.6	38.9	53.8	68.1	70.7	71.6	57.6	44.8	26.2	16.7	41.8
1996	4.1	17.5	21.3	40.7	53.5	66.9	67.8	70.1	58.6	45.2	17.3	6.0	39.1
1997	3.5	14.5	23.9	39.0	53.2	68.1	71.1	68.5	61.8	48.0	25.0	25.7	41.9
1998	13.8	28.2	25.1	48.0	60.0	62.9	72.9	71.3	64.3	48.3	33.3	22.8	45.9
1999	8.8	28.8	35.3	45.8	57.8	66.1	72.4	69.6	56.1	45.4	38.7	24.6	45.8
2000	13.7	26.3	36.9	43.6	58.1	65.3	71.1	69.6	59.4	48.9	22.5	3.1	43.2
2001	15.7	4.2	23.0	44.6	59.1	66.9	74.2	71.4	60.9	45.3	39.5	19.4	43.7
2002	19.5	27.5	21.6	42.4	51.3	70.8	74.8	67.9	61.0	37.7	30.5	22.5	44.0
2003	15.1	12.5	28.4	46.2	54.7	65.0	71.5	71.9	58.3	48.9	25.6	23.2	43.4
2004	9.4	18.1	36.0	45.8	54.3	61.9	68.9	63.4	62.2	47.2	34.4	22.9	43.7
POR= 73 YRS	10.7	16.6	29.0	44.8	56.9	66.6	72.8	70.8	60.0	47.5	29.9	17.0	43.5

HEATING DEGREE DAYS (base 65°F) 2004 ABERDEEN, SD (ABR)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	2	6	208	411	921	1465	1639	1101	1063	454	245	39	7554
1976-77	3	2	165	676	1149	1557	1973	1135	968	395	83	23	8129
1977-78	2	39	172	569	1128	1669	2070	1650	1228	659	226	74	9486
1978-79	13	23	142	540	1221	1678	2051	1750	1245	727	389	68	9847
1979-80	6	41	124	585	1068	1215	1608	1452	1213	463	221	31	8027
1980-81	1	24	192	601	860	1388	1408	1146	907	447	273	43	7290
1981-82	13	1	0	0	0	0							
1982-83				562	1111	1232	1291	1032	976	697	351	89	
1983-84	4	0	198	540	975	2030	1522	1001	1147	533	332	44	8326
1984-85	12	15	312	514	967	1608	1747	1361	891	444	158	145	8174
1985-86	2	42	292	608	1453	1770	1473	1477	897	622	245	32	8913
1986-87	0	59	246	540	1152	1258	1303	961	978	409	134	31	7071
1987-88	4	60	140	666	892	1247	1707	1461	983	584	120	0	7864
1988-89	3	30	193	631	1069	1426	1527	1682	1298	597	244	81	8781
1989-90	0	5	203	561	1085	1724	1222	1221	900	639	308	68	7936
1990-91	7	12	155	586	901	1633	1661	1035	961	491	205	6	7653
1991-92	5	2	206	619	1195	1264	1338	1041	884	631	224	97	7506
1992-93	61	97	206	582	1054	1556	1713	1481	1043	602	240	110	8745
1993-94	17	18	277	599	1109	1441	2002	1609	967	560	147	15	8761
1994-95	15	65	165	475	958	1496	1645	1385	1184	773	341	57	8559
1995-96	11	3	260	620	1154	1493	1890	1372	1348	723	369	59	9302
1996-97	12	5	241	606	1423	1827	1899	1408	1267	772	360	10	9830
1997-98	26	37	135	531	1196	1213	1585	1025	1228	503	182	114	7775
1998-99	1	0	107	511	947	1299	1734	1008	914	569	222	55	7367
1999-00	2	8	264	600	781	1244	1583	1116	866	636	227	76	7403
2000-01	28	19	210	491	1270	1914	1520	1697	1296	613	198	66	9322
2001-02	7	9	172	602	761	1407	1403	1045	1338	671	448	32	7895
2002-03	5	43	207	841	1028	1308	1539	1463	1130	565	319	70	8518
2003-04	0	24	244	502	1175	1288	1721	1353	892	570	337	115	8221
2004-	37	99	157	544	911	1299							

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COOLING DEGREE DAYS (base 65°F) 2004 ABERDEEN, SD (ABR)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0	0	0	0	27	142	420	241	34	13	0	0	877
1976	0	0	0	0	5	193	322	345	85	1	0	0	951
1977	0	0	0	9	85	109	291	67	19	0	0	0	580
1978	0	0	0	0	21	100	179	206	152	0	0	0	658
1979	0	0	0	0	11	83	183	150	75	0	0	0	502
1980	0	0	0	16	55	98	251	150	33	0	0	0	603
1981	0	0	0	2	11	57	314	230					
1982										0	0	0	
1983	0	0	0	0	3	100	329	363	79	0	0	0	874
1984	0	0	0	0	12	70	210	259	31	15	0	0	597
1985	0	0	0	9	48	41	244	121	46	0	0	0	509
1986	0	0	0	1	22	126	240	105	6	0	0	0	500
1987	0	0	0	11	57	166	341	153	30	0	0	0	758
1988	0	0	0	3	81	308	362	279	28	0	0	0	1061
1989	0	0	0	5	14	77	326	228	54	2	0	0	706
1990	0	0	0	16	3	108	159	204	120	0	0	0	610
1991	0	0	0	0	82	187	238	244	72	3	0	0	826
1992	0	0	0	11	59	65	47	85	17	5	0	0	289
1993	0	0	0	0	19	54	137	187	16	2	0	0	415
1994	0	0	0	6	108	180	153	96	69	0	0	0	612
1995	0	0	0	0	0	161	197	212	49	3	0	0	622
1996	0	0	0	0	18	122	106	173	55	1	0	0	475
1997	0	0	0	0	1	108	224	149	46	12	0	0	540
1998	0	0	0	0	30	58	258	203	96	0	0	0	645
1999	0	0	0	0	9	98	238	160	2	0	0	0	507
2000	0	0	0	0	21	92	225	168	48	0	0	0	554
2001	0	0	0	8	21	129	300	214	55	0	0	0	727
2002	0	0	0	0	27	213	317	137	94	0	0	0	788
2003	0	0	0	8	5	79	209	243	51	6	0	0	601
2004	0	0	0	0	13	29	164	57	78	0	0	0	341

SNOWFALL (inches) 2004 ABERDEEN, SD (ABR)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	1.9	1.5	5.1	13.6	8.5	6.8	0.4	0.3	0.0	38.1
1976-77	0.0	0.0	0.0	2.4	0.2	6.3	5.3	11.0	9.0	1.0	0.0	0.0	35.2
1977-78	0.0	0.0	0.0	0.2	20.2	12.5	2.9	5.0	5.8	1.5	0.0	0.0	48.1
1978-79	0.0	0.0	0.0	0.0	8.8	2.1	15.1	10.5	7.2	7.0	0.9	0.0	51.6
1979-80	0.0	0.0	0.0	3.2	0.7	1.0	5.3	6.4	10.7	1.5	0.0	0.0	28.8
1980-81	0.0	0.0	0.0	0.4	0.0	2.3	1.8	2.2	1.6	T	0.0	0.0	8.3
1981-82	0.0	0.0	0.0	0.0	0.0	0.0							
1982-83				0.0	0.0	0.0	0.9	2.2	7.9	2.3	0.0	0.0	
1983-84	0.0	0.0	0.0	T	5.5	5.2	2.0	3.8	17.3	0.1	0.0	0.0	33.9
1984-85	0.0	0.0	T	1.0	0.2	5.6	3.7	1.0	18.4	0.1	0.0	0.0	30.0
1985-86	0.0	0.0	0.0	T	22.4	9.6	4.0	10.5	1.9	9.2	0.0	0.0	57.6
1986-87	0.0	0.0	0.0	0.0	3.4	0.1	1.1	10.5	5.7	T	0.0	0.0	20.8
1987-88	0.0	0.0	0.0	T	5.6	0.9	4.4	4.2	2.5	1.0	0.0	0.0	18.6
1988-89					5.0	16.4	5.1	5.8	13.1	1.6	T	0.0	
1989-90	T	T	0.0	0.1	6.4	1.5	0.8	9.2	4.8	4.7	T	T	27.5
1990-91	0.0	0.0	0.0	1.0	T	7.0	2.2	13.0	5.1	5.5	0.0	0.0	33.8
1991-92	0.0	0.0	0.0	0.4	4.0	0.3	7.9	2.4	0.8	1.1	0.0	0.0	16.9
1992-93	T	0.0	T	3.6	9.3	2.7	10.5	7.1	2.5	3.2	0.0	T	38.9
1993-94	0.0	T	0.0	T	30.1	9.7	16.0	9.1	5.8	6.1	0.0	0.0	76.8
1994-95	T	0.0	0.0	0.0	7.6	6.6	5.8	8.0	22.3	0.0	0.0	0.0	50.3
1995-96	0.0	0.0	0.2	3.5	2.4	5.3	17.7	6.0	9.0	0.4	T	0.0	44.5
1996-97	0.0	0.0	0.0	0.0	20.3	13.9	19.2	9.2	8.5	4.6	0.0	T	75.7
1997-98	0.0	0.0	0.0	0.2	7.7	3.9	11.0	6.4	4.5	0.0	0.0	0.0	33.7
1998-99	0.0	0.0	0.0	0.0	7.6	2.7	10.0	2.7	1.9	1.8	0.0	T	26.7
1999-00	0.0	T	0.0	0.2	0.0	2.2	4.8	7.3	4.5	3.9	0.0	0.0	22.9
2000-01	T	0.0	0.0	0.0	30.5	8.9	4.3	21.0	2.3	7.7	0.0	T	74.7
2001-02	0.0	0.0	0.0	0.1	10.5	1.4	2.5	0.6	9.3	1.9	0.4	0.0	26.7
2002-03	0.0	T	0.0	4.8	1.1	2.9	4.8	5.0	4.2	1.0	0.0	0.0	23.8
2003-04	0.0	0.0	0.0	1.6	9.9	3.8	10.5	3.6	4.1	0.1	0.0	0.0	33.6
2004-	0.0	0.0	0.0	0.0	T	1.5							
POR= 72 YRS	T	T	T	0.8	5.7	5.8	7.2	6.8	6.8	3.6	T	T	36.7

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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 (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 ABERDEEN, SOUTH DAKOTA (ABR)

Aberdeen is located in the northeast quarter of South Dakota, approximately 200 miles south of the geographical center of the North American continent. The surrounding area, extensively cultivated, is the bed of glacial Lake Dakota, which is by far the largest flat area in South Dakota. The lake bed slopes gently to the south. The elevation of Aberdeen at the northern end of the lake bed is 1,300 feet. The elevation at the southern end, some 30 miles distant is 1,280 feet. Low hills rim the area on the east and west. These hills effect ceilings, visibility, and precipitation, which are a hazard to private aircraft operating in the area during periods of marginal weather. Principal drainage for the area is through the southward flowing, meandering James River with its associated meandering rivers and creeks.

Located near the center of the North American land mass, the climate is continental with distinct seasons. Frequent and rapid weather changes occur during all seasons of the year as migratory storms sweep through the area. The winters are cold and dry. Sub-zero minimum temperatures may set in as early as late November, although temperatures of zero and below are generally not recorded until mid-December. Lowest temperatures of the winter generally occur in the period from mid-January to mid-February. During the coldest periods the days are generally sunny with light winds, and these conditions partially moderate the discomfort experienced at such low temperatures. Some days of the winter will be extremely unpleasant with temperatures near or below zero and brisk winds. Heavy snowfalls rarely occur during the first two-thirds of the winter season, with heaviest snowfalls developing during late February and early March as temperatures moderate.

Blizzards are infrequent, many winters will pass without a single occurrence of this type of weather phenomenon. However, difficult driving conditions occur several times during most winters during periods of weather termed ground blizzards.

Spring is a very short and transitional period, but marked by very rapid weather changes. Cool to quite cold nights prevail into mid-May, although afternoon temperatures may be quite warm, as high as the mid-80s. Frost is rarely experienced after the end of May. Precipitation increases markedly during the spring, with 42 percent of the total annual precipitation normally being recorded in the three month period from April through June.

Summers are pleasant with a maximum of sunshine, warm days, and generally cool and comfortable nights. Temperatures of 100 degrees or above may occur several times during the summer season, but low humidities, brisk winds during the heat of the day, and rapid cooling during the evening hours, which generally occur during the periods of elevated temperatures, markedly moderate the physical discomfort normally experienced at these high temperatures. In June and August, thunderstorms are more likely to occur during the early evening and nighttime hours. During July, thunderstorms are approximately equally distributed throughout the 24 hours of the day. Hail is most likely in late May and early June.

Autumn is most pleasant with mild days, cool nights, ample sunshine, and declining occurrences and amounts of precipitation. The first frost may be expected by late September, although it may occur as early as late August. By mid-October, the temperatures during the night will be near or below freezing. The growing season is about 132 days.

# STATION LOCATION

ABERDEEN, SOUTH DAKOTA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE		ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS  REMARKS
				NORTH	WEST	GROUND											
						SEA LEVEL	WIND INSTRUMENT	EXTREME THERMOMETER S	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAINING GAUGE	WINDHOLE GAUGE	8 INCH RAIN GAUGE	HYGROMETER		
*NOTE:																	
<u>AIRPORT</u>																	
Municipal Airport	1/1/48	6/26/50	4 mi. E	45°27'	98°26'	1296	58	5					4	3		FAA operation.	
Municipal Airport	6/27/50	6/28/64	1475 ft. ESE	45°27'	98°26'	1296	58	18	17				16	16	a5	FAA operation. a. Commissioned on field site 8/1/60. b. Effective 6/8/62.	
Administration Building Municipal Airport	6/29/64	9/1/81	None	45°27'	98°26'	1296	20	Unkd5	Unkd5				16	e3	5	Weather Bureau Operation. c. Effective 11/6/64. d. Effective 1/13/81. e. Installed Spring 1981.	
Administration Building Regional Airport	10/1/82	11/01/94	None	45°27'	98°26'	1296	20	5	5				6	3	3	WSO reopened at same location.	
Regional Airport	11/01/94	Present	NA	45°26'	98°25'	f1303									S	ASOS commissioned 11/1/94. f. Ground elevation.	

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