

1998

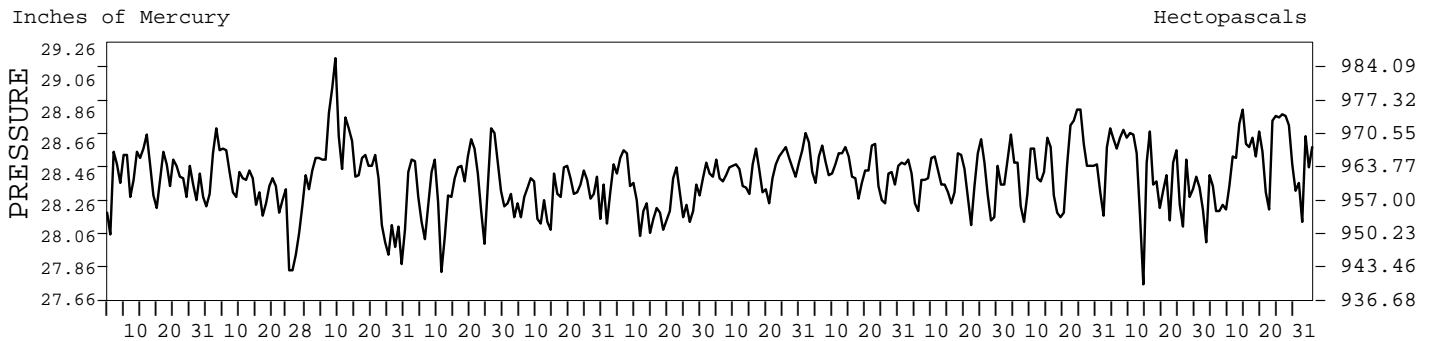
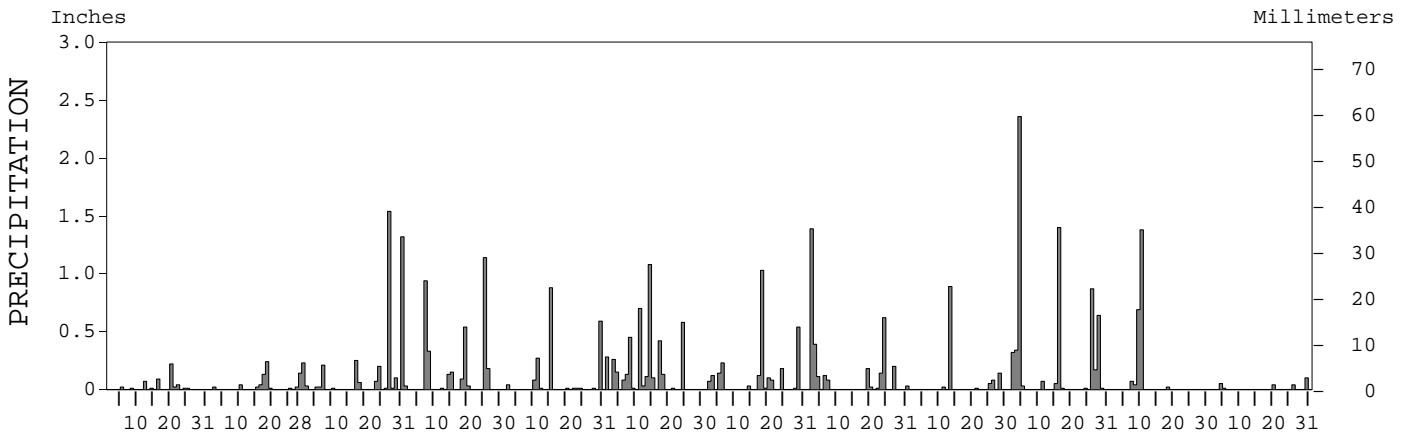
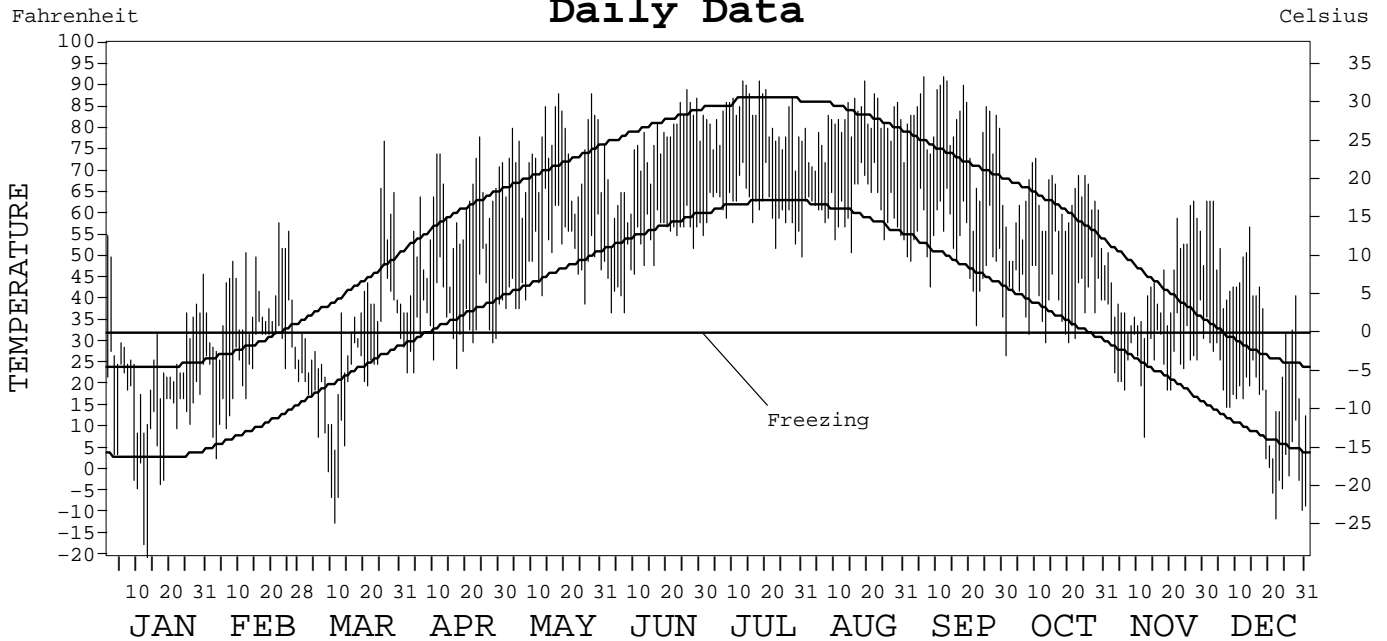
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-4756

SIOUX FALLS, SOUTH DAKOTA (FSD)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE
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METEOROLOGICAL DATA FOR 1998

SIOUX FALLS, SD (FSD)

LATITUDE: 43° 34' 37" N LONGITUDE: 96° 45' 13" W ELEVATION (FT): GRND: 1418 BARO: 1432 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 14944

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	27.6	39.5	34.8	58.3	74.1	74.1	82.5	80.6	80.1	61.1	44.0	35.6	57.7	
	HIGHEST DAILY MAXIMUM	55	58	77	78	88	89	91	91	92	73	63	63	92	
	DATE OF OCCURRENCE	01	22	26	24	28+	26	18+	19	12+	10	27	03+	SEP 12+	
	MEAN DAILY MINIMUM	11.5	24.1	21.2	34.7	49.3	52.1	61.3	61.4	52.4	40.1	26.9	12.4	37.3	
	LOWEST DAILY MINIMUM	-20	3	-12	23	38	37	50	51	34	27	8	-11	-20	
	DATE OF OCCURRENCE	13	03	11	04+	06+	07+	31	15	22	01	12	22	JAN 13	
	AVERAGE DRY BULB	19.6	31.8	28.0	46.5	61.7	63.1	71.9	71.0	66.3	50.6	35.5	24.0	47.5	
	MEAN WET BULB	18.7	29.9	26.3	42.2	55.4	58.8	67.1	66.8	59.1	46.8	33.3	21.6	43.8	
	MEAN DEW POINT	15.5	26.8	22.9	36.0	49.8	55.3	64.2	64.2	54.0	43.0	29.8	16.8	39.9	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	3	1	5	0	0	0	9	
	MAXIMUM ≤ 32°	23	7	16	0	0	0	0	0	0	0	2	11	59	
	MINIMUM ≤ 32°	31	25	25	13	0	0	0	0	0	6	25	30	155	
MINIMUM ≤ 0°	6	0	4	0	0	0	0	0	0	0	0	8	18		
H/C	HEATING DEGREE DAYS	1402	922	1138	549	147	117	4	2	79	440	881	1262	6943	
	COOLING DEGREE DAYS	0	0	0	0	54	69	225	196	123	0	0	0	667	
RH	MEAN (PERCENT)	84	83	82	69	67	76	77	80	68	78	82	75	77	
	HOUR 06 LST	88	91	88	87	86	91	94	95	88	90	88	86	89	
	HOUR 12 LST	78	76	76	55	54	64	64	67	50	67	72	65	66	
	HOUR 18 LST	82	78	78	53	52	61	63	68	54	72	81	71	68	
	HOUR 24 LST	88	87	86	79	76	87	88	90	80	85	86	81	84	
S	PERCENT POSSIBLE SUNSHINE	42	23	24		61	62	70	70	83	54	58	69		
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	5	3	1	0	1	2	2	1	3	3	4	2	27	
	THUNDERSTORMS	0	0	2	3	4	9	8	10	5	5	1	0	47	
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.)	28.45	28.36	28.48	28.39	28.33	28.32	28.50	28.50	28.42	28.52	28.44	28.56	28.44	
	MEAN SEA-LEVEL PRESS. (IN.)	30.04	29.91	30.05	29.92	29.83	29.82	29.99	30.00	29.92	30.05	29.99	30.14	29.97	
WINDS	RESULTANT SPEED (MPH)	0.4	0.7	4.8	2.9	1.1	0.2	2.5	3.0	2.6	2.3	0.5	2.9	0.5	
	RES. DIR. (TENS OF DEGS.)	35	15	02	05	16	36	14	13	17	17	28	28	12	
	MEAN SPEED (MPH)	8.4	9.3	11.4	10.4	10.0	8.4	7.4	7.7	8.4	9.7	10.2	8.5	9.1	
	PREVAIL. DIR. (TENS OF DEGS.)	31	18	36	01	17	30	18	16	18	18	19	20	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	29	33	32	45	38	39	51	44	28	38	43	33	51	
	DIR. (TENS OF DEGS.)	31	13	03	18	31	29	32	03	28	10	30	33	32	
	DATE OF OCCURRENCE	09	25	31+	12	30	24	18	24	26	04	10	29	JUL 18	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	36	44	39	55	53	56	64	54	37	40	54	39	64	
DIR. (TENS OF DEGS.)	32	13	03	17	28	27	32	03	31	21	31	34	32		
DATE OF OCCURRENCE	09	25	31	12	30	24	18	24	26	16+	10	18	JUL 18		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.50	0.67	4.08	3.57	1.92	4.52	2.66	3.29	1.19	6.28	2.20	0.24	31.12	
	GREATEST 24-HOUR (IN.)	0.22	0.24	1.54	1.14	0.88	1.11	1.03	1.45	0.89	2.36	2.06	0.10	2.36	
	DATE OF OCCURRENCE	20	18	27	25	15	13-14	18	02-03	13	04	09-10	30	OCT 04	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	10	10	15	11	11	16	13	12	6	13	5	5	127	
PRECIPITATION ≥ 0.10	1	3	7	7	3	12	8	8	2	7	2	1	61		
PRECIPITATION ≥ 1.00	0	0	2	1	0	1	1	1	0	2	1	0	9		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	11.7	6.9	21.4	0.3	0.0	T	0.0	0.0	0.0	0.0	14.8	9.0	64.1	
	GREATEST 24-HOUR (IN.)	5.3	2.4	9.3	0.3	0.0	T	0.0	0.0	0.0	0.0	12.6	6.3	12.6	
	DATE OF OCCURRENCE	20	28	31	01		03					10	30	NOV 10	
	MAXIMUM SNOW DEPTH (IN.)	8	1	7	7	0	0	0	0	0	0	13	6	13	
	DATE OF OCCURRENCE	20	28+	31	01							10	30	NOV 10	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3	2	4	0	0	0	0	0	0	0	1	3	13		

PRECIPITATION (inches) 1998 SIOUX FALLS, SD (FSD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	1.71	2.55	1.09	0.17	2.43	4.85	2.73	5.07	2.41	2.05	0.34	1.18	26.58
1970	0.37	0.10	2.03	3.75	4.83	3.81	2.98	0.53	3.14	3.13	2.17	0.54	27.38
1971	0.13	0.90	0.85	1.59	1.06	6.10	2.92	0.71	3.23	3.06	2.45	0.64	23.64
1972	0.18	0.40	0.97	2.73	7.25	2.09	3.49	2.65	1.75	1.78	1.89	1.25	26.43
1973	0.43	0.43	3.52	2.12	1.93	2.38	3.50	1.05	5.61	5.73	1.01	0.48	28.19
1974	0.13	0.30	1.65	1.33	3.11	2.79	1.27	5.16	0.58	0.34	0.27	0.10	17.03
1975	1.35	0.22	1.95	2.45	1.66	4.48	0.62	9.09	1.35	0.49	2.25	0.19	26.10
1976	0.41	0.48	1.60	2.15	1.02	1.02	1.53	1.31	0.76	0.71	0.07	0.36	11.42
1977	0.19	0.83	3.60	2.17	3.17	1.73	3.64	5.63	5.63	2.36	1.80	0.87	31.62
1978	0.47	0.33	0.56	3.98	3.47	2.91	4.79	3.08	2.45	0.14	0.48	0.51	23.17
1979	1.14	0.41	3.47	2.75	4.90	3.01	3.13	4.35	4.03	3.30	1.72	0.04	32.25
1980	0.18	0.47	0.70	0.77	2.52	2.17	1.63	2.92	0.79	1.36	0.02	0.29	13.82
1981	0.12	0.33	1.86	0.58	0.61	3.90	3.89	2.28	0.50	2.45	1.21	0.38	18.11
1982	0.76	0.13	1.17	1.87	4.72	1.18	4.60	5.23	3.49	5.18	2.94	1.99	33.26
1983	0.52	0.22	3.35	2.88	2.92	6.75	1.82	2.00	1.92	0.71	2.95	0.73	26.77
1984	0.37	1.10	1.83	5.79	2.95	8.43	1.63	0.76	1.62	4.11	0.03	1.02	29.64
1985	0.45	0.05	2.37	5.18	3.29	2.52	2.70	4.07	3.34	0.75	1.97	0.47	27.16
1986	0.72	0.05	1.50	5.15	2.42	3.93	2.59	2.77	9.26	1.22	0.89	T	30.50
1987	0.19	0.26	3.27	0.28	2.94	1.78	3.16	1.36	2.05	0.31	1.66	1.40	18.66
1988	1.54	0.25	0.63	3.00	1.54	0.91	0.49	4.02	4.39	0.02	1.98	0.37	19.14
1989	0.23	0.51	1.07	1.59	1.42	2.50	1.37	2.46	3.38	0.10	0.91	0.25	15.79
1990	0.08	0.31	1.57	1.86	4.07	4.86	1.77	1.17	0.47	1.82	0.61	0.61	19.20
1991	0.22	0.34	0.86	2.21	6.20	6.36	2.26	1.41	3.95	1.65	1.78	0.20	27.44
1992	0.75	1.76	2.36	2.01	1.80	2.44	8.41	5.29	3.06	2.72	1.04	0.83	32.47
1993	0.70	0.81	2.04	2.61	8.26	6.43	7.86	3.10	1.88	0.62	1.50	0.30	36.11
1994	0.97	0.63	0.20	3.34	1.26	6.03	1.70	2.66	2.36	2.36	1.03	0.33	22.87
1995	0.18	0.13	4.06	5.83	4.76	2.70	2.55	5.11	1.86	2.76	0.38	0.10	30.42
1996	0.99	0.16	0.82	0.55	5.27	1.14	0.98	1.79	2.82	1.63	2.91	0.78	19.84
1997	0.41	1.39	0.23	2.43	3.58	3.77	2.94	1.58	1.59	1.75	0.35	0.24	20.26
1998	0.50	0.67	4.08	3.57	1.92	4.52	2.66	3.29	1.19	6.28	2.20	0.24	31.12
POR= 108 YRS	0.60	0.76	1.47	2.52	3.52	4.11	2.97	3.08	2.68	1.54	1.02	0.70	24.97

WBAN : 14944

AVERAGE TEMPERATURE (°F) 1998 SIOUX FALLS, SD (FSD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	8.8	19.0	20.5	48.4	59.6	61.4	73.5	73.3	62.3	43.4	33.4	19.5	43.6
1970	4.7	19.4	26.4	44.8	59.9	69.0	73.3	72.5	61.9	46.2	32.0	15.6	43.8
1971	8.3	18.8	31.2	47.8	55.3	71.3	69.3	73.0	61.5	51.7	33.3	17.4	44.9
1972	8.9	11.5	31.5	43.8	59.1	66.7	70.2	70.5	59.5	44.4	31.9	14.8	42.7
1973	18.5	23.1	39.7	46.4	56.9	68.9	74.4	76.7	60.1	52.9	34.7	17.1	47.5
1974	12.8	24.3	34.5	48.9	55.7	65.9	79.2	67.6	57.7	51.4	33.9	23.6	46.3
1975	17.1	16.5	25.5	41.4	61.1	67.6	78.5	72.7	57.0	52.1	33.5	20.4	45.3
1976	15.6	29.5	34.8	51.0	57.1	71.5	76.7	75.2	62.9	44.3	27.6	16.6	46.9
1977	4.7	25.6	36.0	53.8	66.8	71.1	77.0	68.1	61.9	47.7	31.3	16.3	46.7
1978	1.9	8.6	30.5	44.3	57.7	66.6	70.9	71.1	66.7	47.8	31.3	14.6	42.7
1979	1.8	7.5	28.2	44.1	55.2	67.8	74.0	69.9	64.3	48.2	30.2	27.1	43.2
1980	18.1	18.1	31.7	50.1	58.4	68.8	74.2	71.1	62.0	45.5	36.7	21.2	46.3
1981	22.3	26.0	38.4	53.5	58.3	70.4	75.5	71.1	63.0	48.7	39.5	18.0	48.7
1982	3.8	20.2	32.8	43.9	59.6	62.6	74.4	71.3	60.0	48.8	30.3	24.5	44.4
1983	20.1	26.2	33.1	41.5	55.1	66.7	77.1	78.3	63.5	49.6	34.9	2.1	45.7
1984	17.4	27.8	24.6	45.8	55.9	68.1	73.6	74.2	57.2	50.4	36.2	20.4	46.0
1985	13.4	19.9	37.8	52.8	62.7	64.2	71.5	66.3	58.2	46.6	20.7	9.5	43.6
1986	20.7	16.9	36.9	48.2	58.8	69.6	75.0	66.5	59.6	48.6	28.7	25.2	46.2
1987	24.0	32.8	37.8	52.6	64.9	71.4	77.0	68.8	62.8	43.9	38.1	24.4	49.9
1988	9.6	15.0	36.4	46.4	65.1	76.3	77.4	74.8	62.6	44.6	34.2	22.1	47.0
1989	25.5	9.2	29.8	47.8	58.0	66.9	77.3	72.0	60.2	49.5	29.5	11.5	44.8
1990	28.2	24.9	36.7	46.4	56.4	70.1	71.2	72.9	66.5	48.0	35.6	15.3	47.7
1991	13.7	29.8	37.0	50.0	62.5	73.5	73.1	72.8	62.0	46.1	25.7	26.0	47.7
1992	26.5	30.0	36.7	43.7	60.5	67.0	65.5	66.1	60.3	48.7	30.4	19.2	46.2
1993	14.0	15.0	29.0	44.1	57.1	65.1	71.4	71.4	56.8	47.1	29.9	21.9	43.6
1994	6.2	13.3	36.6	46.5	63.9	71.6	70.8	69.5	65.2	52.4	36.5	21.8	46.2
1995	17.7	23.5	34.8	41.8	55.7	70.0	75.1	76.9	60.4	48.3	29.2	23.7	46.4
1996	10.9	22.6	27.4	42.4	54.9	68.8	69.1	70.0	59.4	47.7	23.5	10.3	42.3
1997	8.6	17.9	30.6	40.6	51.5	68.8	72.4	68.9	62.4	49.4	27.9	26.1	43.8
1998	19.6	31.8	28.0	46.5	61.7	63.1	71.9	71.0	66.3	50.6	35.5	24.0	47.5
POR= 78 YRS	15.1	20.6	32.2	46.9	58.9	68.4	73.2	71.7	61.8	49.8	32.9	20.4	46.0

HEATING DEGREE DAYS (base 65°F) 1998 SIOUX FALLS, SD (FSD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	2	2	117	668	941	1404	1867	1274	1192	603	206	46	8322
1970-71	16	3	195	577	986	1526	1754	1288	1041	511	297	17	8211
1971-72	29	12	177	409	945	1470	1737	1551	1031	628	236	50	8275
1972-73	29	43	194	631	984	1555	1440	1166	775	549	256	19	7641
1973-74	1	0	178	373	902	1481	1616	1133	939	477	303	85	7488
1974-75	2	39	240	419	927	1279	1476	1351	1217	701	157	51	7859
1975-76	3	5	271	407	937	1377	1528	1023	929	418	261	23	7182
1976-77	1	0	142	643	1114	1495	1867	1097	891	341	38	4	7633
1977-78	0	22	125	530	1000	1503	1957	1576	1063	613	252	78	8719
1978-79	11	18	104	525	1004	1554	1960	1607	1134	622	321	40	8900
1979-80	0	28	103	512	1038	1168	1448	1349	1027	464	243	32	7412
1980-81	1	14	157	602	841	1354	1318	1087	816	353	230	5	6778
1981-82	5	5	114	497	758	1452	1899	1247	991	632	174	105	7879
1982-83	0	28	188	494	1035	1249	1385	1082	982	699	317	67	7526
1983-84	1	0	160	476	894	1947	1468	1072	1247	569	285	23	8142
1984-85	2	12	265	451	857	1376	1594	1260	836	378	124	101	7256
1985-86	5	44	269	562	1327	1721	1363	1341	865	498	204	17	8216
1986-87	0	54	180	504	1082	1227	1265	896	835	387	96	23	6549
1987-88	5	54	110	649	801	1252	1715	1448	878	554	83	1	7550
1988-89	0	22	126	628	916	1321	1219	1559	1083	514	235	61	7684
1989-90	0	5	192	481	1056	1655	1131	1117	871	586	268	39	7401
1990-91	11	7	109	527	875	1538	1587	977	859	455	192	7	7144
1991-92	6	3	180	583	1171	1200	1186	1009	871	636	187	35	7067
1992-93	35	63	159	500	1030	1414	1576	1397	1109	621	244	74	8222
1993-94	2	19	257	557	1046	1331	1821	1443	872	563	140	8	8059
1994-95	5	15	100	386	849	1332	1461	1157	931	689	281	55	7261
1995-96	3	0	198	523	1068	1275	1674	1224	1159	672	334	44	8174
1996-97	8	4	228	535	1237	1691	1738	1313	1060	727	413	7	8961
1997-98	20	26	130	497	1105	1202	1402	922	1138	549	147	117	7255
1998-	4	2	79	440	881	1262							

WBAN : 14944

COOLING DEGREE DAYS (base 65°F) 1998 SIOUX FALLS, SD (FSD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	0	58	43	270	265	41	4	0	0	681
1970	0	0	0	6	54	172	280	241	108	2	0	0	863
1971	0	0	0	4	1	211	167	268	79	2	0	0	732
1972	0	0	0	0	60	108	197	219	35	0	0	0	619
1973	0	0	0	0	13	143	300	370	38	8	0	0	872
1974	0	0	0	2	23	118	450	126	26	6	0	0	751
1975	0	0	0	0	44	134	428	252	36	16	0	0	910
1976	0	0	0	2	24	226	370	324	85	9	0	0	1040
1977	0	0	0	11	101	197	382	123	40	0	0	0	854
1978	0	0	0	0	32	133	202	213	163	0	0	0	743
1979	0	0	0	3	25	131	289	189	87	0	0	0	724
1980	0	0	0	23	46	153	290	207	74	6	0	0	799
1981	0	0	0	14	27	175	342	203	61	0	0	0	822
1982	0	0	0	4	12	42	298	230	45	0	0	0	631
1983	0	0	0	0	15	122	381	420	120	2	0	0	1060
1984	0	0	0	0	10	120	276	305	36	4	0	0	751
1985	0	0	0	19	59	85	212	93	72	0	0	0	540
1986	0	0	0	0	20	163	318	108	25	0	0	0	634
1987	0	0	0	20	100	219	381	178	53	0	0	0	951
1988	0	0	0	1	94	349	393	330	61	0	0	0	1228
1989	0	0	0	6	25	125	387	228	56	7	0	0	834
1990	0	0	0	31	11	198	209	258	160	7	0	0	874
1991	0	0	0	11	119	265	264	249	100	5	0	0	1013
1992	0	0	0	4	53	103	58	103	25	5	0	0	351
1993	0	0	0	0	5	85	208	223	16	9	0	0	546
1994	0	0	0	13	113	212	191	160	113	2	0	0	804
1995	0	0	0	0	0	214	324	375	68	11	0	0	992
1996	0	0	0	0	27	163	140	167	63	4	0	0	564
1997	0	0	0	0	1	128	255	152	62	20	0	0	618
1998	0	0	0	0	54	69	225	196	123	0	0	0	667

SNOWFALL (inches) 1998 SIOUX FALLS, SD (FSD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	T	2.9	15.2	5.9	1.5	19.3	3.0	T	0.0	47.8
1970-71	0.0	0.0	0.0	5.1	0.5	8.5	1.9	1.7	4.7	0.3	0.0	0.0	22.7
1971-72	0.0	0.0	0.0	T	4.4	10.6	1.8	10.6	5.0	0.8	0.0	0.0	33.2
1972-73	0.0	0.0	0.0	0.2	2.5	6.2	5.5	7.4	0.3	T	0.0	0.0	22.1
1973-74	0.0	0.0	0.0	T	0.1	11.6	1.9	2.9	5.1	3.3	0.0	0.0	24.9
1974-75	0.0	0.0	0.0	0.0	2.5	1.1	18.3	3.1	17.9	T	0.0	0.0	42.9
1975-76	0.0	0.0	0.0	T	13.2	2.5	6.5	6.6	7.9	T	0.1	0.0	36.8
1976-77	0.0	0.0	0.0	3.4	0.7	6.7	2.7	1.9	13.5	T	0.0	0.0	28.9
1977-78	0.0	0.0	0.0	0.9	8.6	8.0	7.6	6.5	5.5	0.6	0.0	0.0	37.7
1978-79	0.0	0.0	0.0	0.0	2.9	9.5	19.0	7.3	13.2	1.5	0.0	0.0	53.4
1979-80	0.0	0.0	0.0	T	15.2	0.3	2.9	5.5	5.8	T	0.0	0.0	29.7
1980-81	0.0	0.0	0.0	0.8	0.4	4.6	1.4	3.1	T	0.5	0.0	0.0	10.8
1981-82	0.0	0.0	0.0	0.8	8.9	5.5	16.9	1.0	1.8	7.5	0.0	0.0	42.4
1982-83	0.0	0.0	0.0	3.3	4.1	17.6	4.7	3.6	18.8	18.4	0.0	0.0	70.5
1983-84	0.0	0.0	0.0	T	19.0	13.7	5.0	11.9	19.4	6.0	0.0	0.0	75.0
1984-85	0.0	0.0	T	T	T	4.7	7.4	0.7	16.1	2.5	0.0	0.0	31.4
1985-86	0.0	0.0	0.9	0.2	21.9	9.1	9.1	0.9	8.2	0.3	0.0	0.0	50.6
1986-87	0.0	0.0	0.0	T	5.4	T	2.4	0.3	T	T	0.0	0.0	8.1
1987-88	0.0	0.0	0.0	0.1	7.5	13.3	17.9	7.3	2.5	11.3	0.0	0.0	59.9
1988-89	0.0	0.0	0.0	T	10.9	2.2	2.0	10.0	16.0	0.7	T	0.0	41.8
1989-90	0.0	0.0	0.0	0.0	2.4	4.0	0.2	5.8	0.7	T	0.0	T	13.1
1990-91	0.0	0.0	0.0	1.2	8.4	8.8	5.4	5.4	3.2	T	T	T	32.4
1991-92	0.0	0.0	0.0	10.0	10.8	0.2	3.8	11.2	8.4	3.5	T	T	47.9
1992-93	0.0	0.0	0.0	T	4.7	8.4	8.6	13.1	14.9	2.2	T	T	51.9
1993-94	T	0.0	T	T	8.8	4.6	16.8	13.0	1.1	14.9	0.0	T	59.2
1994-95	0.0	0.0	0.0	0.0	9.7	7.0	0.5	2.4	8.8	12.5	0.0	0.0	40.9
1995-96	T	0.0	0.0	7.4	5.1	1.9	15.4	1.7	6.9				
1996-97			0.0	T	11.3	19.8	8.8	16.5	1.3	6.0	T	0.0	
1997-98	0.0	0.0	0.0	0.4	5.0	3.3	11.7	6.9	21.4	0.3	0.0	T	49.0
1998-	0.0	0.0	0.0	0.0	14.8	9.0							
POR= 52 YRS	T	0.0	0.0	0.8	5.7	7.0	6.7	7.9	9.3	2.8	0.2	T	40.4

WBAN : 14944

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
SIOUX FALLS,
SOUTH DAKOTA (FSD)

Sioux Falls is located in the Big Sioux River Valley in southeast South Dakota. The surrounding terrain is gently rolling. The land slopes upward for about 100 miles north and northwest to an elevation about 400 feet higher than the city. To the southeast, the land slopes downward 200 to 300 feet over the same distance. Little change in elevation occurs in the remaining directions.

The climate is of the continental type. There are frequent weather changes from day to day or week to week as the locality is visited by differing air masses. Cold air masses arrive from the interior of Canada, cool, dry air from the northern Pacific, warm, moist air from the Gulf of Mexico, or hot, dry air from the southwest.

Temperatures fluctuate frequently as cold air masses move in very rapidly. During the late fall and winter, cold fronts accompanied by strong, gusty winds drop temperatures by 20 to 30 degrees in a 24-hour period. Severe cold spells usually last only a few days. The winter months of December through February have experienced cold spells with average temperatures under 8 degrees and more than 60 consecutive days below 32 degrees.

Temperatures of 100 degrees and above occur about one in every three years, and will most likely happen in July. Summer nights are usually comfortable with temperatures below 70 degrees.

Rainfall is heavier during the spring and summer with lighter amounts in winter. Nearly 64 percent of the normal yearly precipitation falls during the growing season of April through August.

One or two very heavy snows usually fall each winter. Eight to 12 inches of snow may fall in 24 hours. There have been a few snows in excess of 15 inches and almost 30 inches have fallen during a severe winter storm. Strong winds often cause drifting snow, and blizzard conditions may block highways for a day or so.

Southerly winds prevail from late spring to early fall with northwest winds the remainder of the year. Strong winds of 70 mph with gusts to 90 mph have occurred.

Thunderstorms are frequent during the late spring and summer with June and July the most active months. The thunderstorms usually occur during the late afternoon and evening with a secondary peak of activity between 2 and 5 in the morning. Some of the most severe thunderstorms with damaging winds, hail and an occasional tornado, occur most frequently June.

There is occasional flooding in the lower areas of Sioux Falls along the Big Sioux River and Skunk Creek. Runoff from the melting snow in the spring often causes substantial rises in the rivers. A diversion canal around Sioux Falls has reduced the threat of damaging floods.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 1 and the average last occurrence in the spring is May 10.

STATION LOCATION

SIoux FALLS, SOUTH DAKOTA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											REMARKS			
						SEA LEVEL	GROUND													
							WIND	TEMP	PRECIP	REL HUM	WIND DIR	WIND SPC	WIND DIR	WIND SPC	WIND DIR	WIND SPC		WIND DIR	WIND SPC	
<u>COOPERATIVE</u>																				
213 South Menlo	1/01/00	7/31/08		43° 33'	96° 44'	1460														
924 West 10th Street	8/01/08	10/31/08	528 ft. N	43° 33'	96° 44'	1460														
610 N. Summit	11/01/08	10/31/41	1600 ft. NNE	43° 33'	96° 44'	1489														
<u>AIRPORT</u>																				
Old Administration Bldg	11/01/41	11/30/42	1 mi. NW	43° 34'	96° 44'	1420	45	26	26											Second-Order Weather Bureau.
<u>COOPERATIVE</u>																				
610 N. Summit	12/01/42	12/30/45	1 mi. SE	43° 33'	96° 44'	1489														
<u>AIRPORT</u>																				
Old Administration Bldg Municipal Airport	12/31/45	9/24/47	1 mi. NW	43° 34'	96° 44'	1420	45	5	5					3						First-Order Weather Bureau.
New Administration Bldg Municipal Airport Foss Field	9/24/47	1/14/93	500 ft. SW	43° 34'	96° 44'	d1418	a17	5	5					b4						a - 47 ft. to 4/16/56 and 55 ft. to 11/25/61. b - 5 ft. to 5/31/57 and 5 ft. to 10/12/64. c - Commissioned 2400 ft. NW of thermometer site 8/1/63. d - 1400 ft. to 8/1/63.
Weather Service Bldg Foss Field	1/12/71	9/14/93	1 mi. N	43° 35'	96° 44'	1418	j30	s5	s5	NA	f3	5g5		5		e4h4	NA			e - Same site as prior to 1/12/71. s - Standby equipment. f - Commissioned 2/1/71. Removed 10/1/76. g - Type change 2/28/83. h - Type change 7/23/85. j - Moved 7/18/84. k - Moved 9/14/93.
NWS Forecast Office NOAA 1. Weather Lane Foss Field	9/14/93	Present	1350 ft. E	43° 35'	96° 44'	1418	k20	k5	k5	NA	k5	k5		k5		k5	NA			S ASOS Commissioned 04/01/96

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