

2003

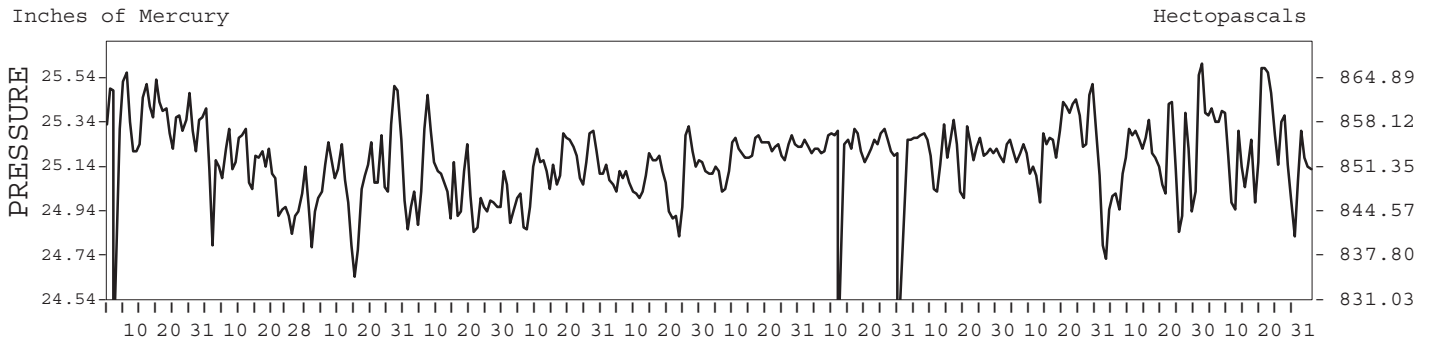
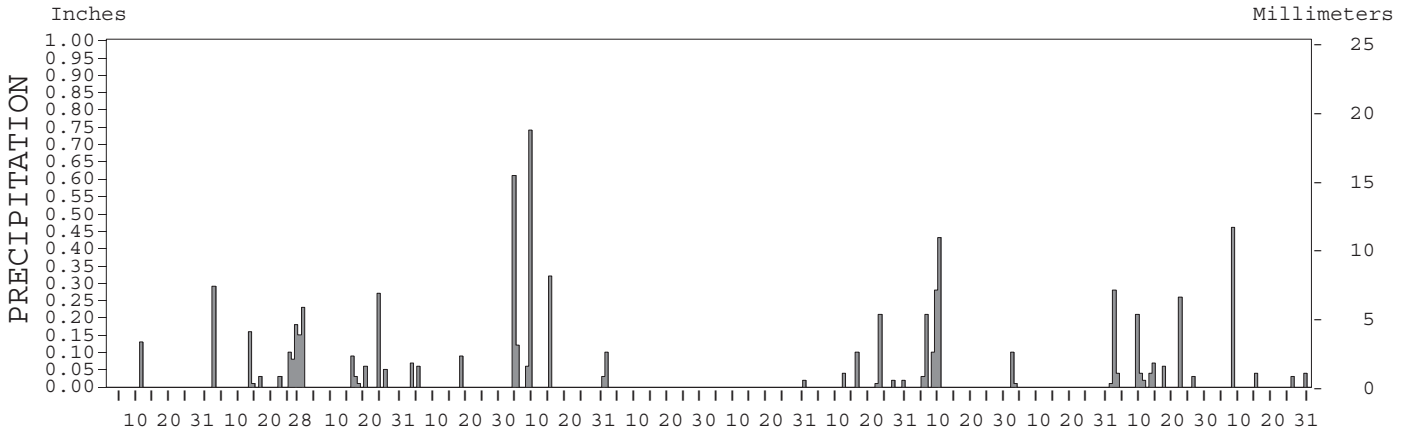
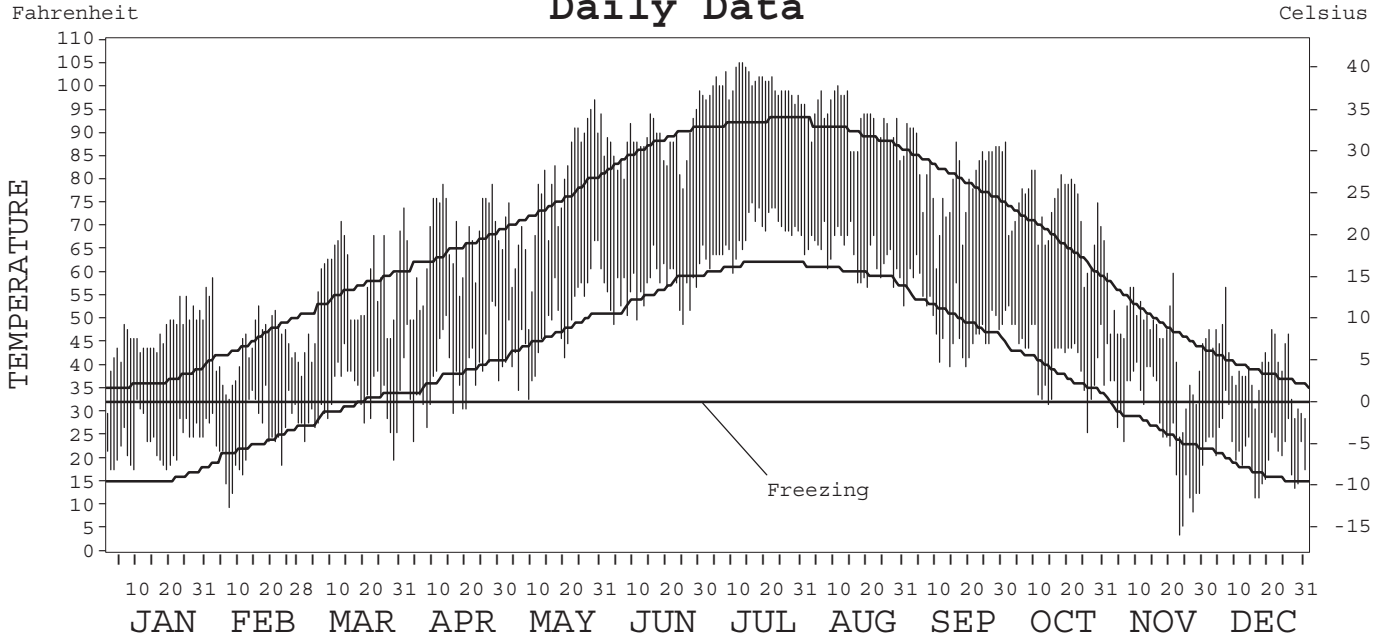
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-7666

GRAND JUNCTION,
COLORADO (GJT)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 2003

GRAND JUNCTION, CO (GJT)

LATITUDE: 39° 08' 03" N LONGITUDE: 108° 32' 15" W ELEVATION (FT): GRND: 4823 BARO: 4826 TIME ZONE: MOUNTAIN (UTC + 7) WBAN: 23066

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	46.9	44.8	56.3	66.8	77.2	87.7	100.2	92.7	80.9	73.2	46.0	40.5	67.8	
	HIGHEST DAILY MAXIMUM	57	59	71	79	97	99	105	100	92	88	60	57	105	
	DATE OF OCCURRENCE	31	02	13	28+	29	30	13+	11	01	01	21+	07	JUL 13+	
	MEAN DAILY MINIMUM	23.6	25.0	32.5	39.1	49.0	56.7	67.9	63.6	49.7	41.8	27.2	21.9	41.5	
	LOWEST DAILY MINIMUM	18	10	20	24	33	49	60	53	40	26	4	12	4	
	DATE OF OCCURRENCE	19+	07	29	04	09	25+	10	31	19+	26	23	17+	NOV 23	
	AVERAGE DRY BULB	35.3	34.9	44.4	53.0	63.1	72.2	84.1	78.2	65.3	57.5	36.6	31.2	54.7	
	MEAN WET BULB	30.2	29.6	36.3	40.2	49.6	53.6	59.5	49.7	43.1	32.5	27.3	21.4		
	MEAN DEW POINT	23.5	21.5	25.3	23.1	36.7	36.6	41.3		34.8	24.8	26.6	21.4		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	8	10	31	21	4	0	0	0	0	74
	MAXIMUM ≤ 32°	1	0	0	0	0	0	0	0	0	0	4	5	10	
	MINIMUM ≤ 32°	30	23	17	7	0	0	0	0	0	2	18	30	127	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	915	835	631	358	163	1	0	0	66	235	847	1040	5091	
	COOLING DEGREE DAYS	0	0	0	2	111	226	596	414	83	7	0	0	1439	
RH	MEAN (PERCENT)	67	63	52	36	42	30	24	37	38	32	70	70	47	
	HOUR 05 LST	81	76	66	53	60	45	35	55	50	45	78	77	60	
	HOUR 11 LST	59	57	43	27	35	23	20	32	30	27	61	64	40	
	HOUR 17 LST	49	49	36	22	26	19	15	23	26	21	60	61	34	
	HOUR 23 LST	73	65	57	41	49	34	26	39	42	36	74	74	51	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	0	1	0	0	0	0	0	0	0	2	1	6	
	THUNDERSTORMS	0	0	0	0	1	2	3	7	4	0	0	0	17	
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.)		25.09	25.08	25.03	25.10	25.08	25.19		25.20	25.21	25.19	25.22		
	MEAN SEA-LEVEL PRESS. (IN.)		29.99		29.80	29.83	29.76	29.84				30.10	30.17		
WINDS	RESULTANT SPEED (MPH)	2.0	1.0	1.5	2.2	2.2	0.5	1.3		2.4	2.6	1.7	1.6		
	RES. DIR. (TENS OF DEGS.)	09	06	04	18	11	16	15		12	12	09	08		
	MEAN SPEED (MPH)	4.8	6.1	8.1	10.4	8.8	9.1	9.7	8.5	7.9	7.6	5.5	5.8	7.7	
	PREVAIL. DIR. (TENS OF DEGS.)	11	11	10	13	12	11	13	12	12	11	10	11	11	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	18	37	43	40	36	39	43	36	39	36	35	29	43	
	DIR. (TENS OF DEGS.)	13	34	24	19	15	31	14	11	13	25	32	13	14	
	DATE OF OCCURRENCE	06	22	26	02	18	09	16	02	09	01	17	26	JUL 16	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	20	41	52	60	48	53	47	41	44	45	45	39	60	
DIR. (TENS OF DEGS.)	34	34	24	16	21	33	14	11	13	26	25	12	16		
DATE OF OCCURRENCE	15	22	26	21	03	02	16	02	09	01	03	26	APR 21		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.13	1.03	0.74	0.22	1.88	0.10	0.02	0.40	1.05	0.11	1.06	0.57	7.31	
	GREATEST 24-HOUR (IN.)	0.13	0.29	0.27	0.09	0.80	0.10	0.02	0.21	0.64	0.10	0.31	0.46	0.80	
	DATE OF OCCURRENCE	11	27-28+	24	18	08-09	01	31	23	09-10	02	02-03	08	MAY 08-09	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	1	9	7	3	6	1	1	6	5	2	11	4	56	
PRECIPITATION ≥ 0.10	1	5	2	0	4	1	0	2	4	1	3	1	24		
PRECIPITATION ≥ 1.00	0	0	0	0	0	0	0	0	0	0	0	0	0		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	T	4.1	3.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.7	16.0	
	GREATEST 24-HOUR (IN.)	T	1.6	3.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.2	2.3	3.9	
	DATE OF OCCURRENCE	10+	28	01	03							22	08	MAR 01	
	MAXIMUM SNOW DEPTH (IN.)	1	2	1	0	0	0	0	0	0	0	1	1	2	
	DATE OF OCCURRENCE	01	28	01								24+	15	FEB 28	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	0	2	1	0	0	0	0	0	0	0	1	1	5		

NORMALS, MEANS, AND EXTREMES

GRAND JUNCTION, CO (GJT)

LATITUDE: 39° 08' 03" N LONGITUDE: 108° 32' 15" W ELEVATION (FT): GRND: 4823 BARO: 4826 TIME ZONE: MOUNTAIN (UTC + 7) WBAN: 23066

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	36.6	45.4	55.7	64.3	74.5	86.9	92.1	89.6	80.3	66.7	49.8	38.9	65.1
	MEAN DAILY MAXIMUM	56	36.6	44.8	54.8	65.1	75.9	87.4	93.3	89.9	81.0	67.8	50.5	39.2	65.5
	HIGHEST DAILY MAXIMUM	57	60	68	81	89	101	105	105	103	100	88	75	64	105
	YEAR OF OCCURRENCE		1971	1986	1971	1992	2000	1990	2003	2000	1995	2003	1977	1980	JUL 2003
	MEAN OF EXTREME MAXS.	56	49.4	58.4	70.7	80.5	89.7	98.5	101.0	98.1	92.6	81.6	64.9	52.6	78.2
	NORMAL DAILY MINIMUM	30	15.6	22.7	31.0	37.5	46.4	55.3	61.4	59.7	50.4	38.6	26.3	17.5	38.5
	MEAN DAILY MINIMUM	56	16.5	23.2	30.8	38.7	48.0	57.0	63.9	61.8	52.8	41.1	28.5	19.1	40.1
	LOWEST DAILY MINIMUM	57	-23	-18	5	11	26	34	44	43	29	18	-2	-17	-23
	YEAR OF OCCURRENCE		1963	1989	1948	1975	2002	1976	1993	1968	1978	1993	1976	1990	JAN 1963
	MEAN OF EXTREME MINS.	56	1.8	8.0	17.5	25.5	34.5	44.5	55.6	53.2	40.2	28.2	15.1	5.5	27.5
	NORMAL DRY BULB	30	26.1	34.1	43.4	50.9	60.5	71.1	76.8	74.7	65.4	52.7	38.1	28.2	51.8
	MEAN DRY BULB	56	26.6	33.9	42.7	51.9	61.8	72.3	78.6	75.8	67.0	54.4	39.6	29.0	52.8
	MEAN WET BULB	20	24.3	29.9	36.2	41.2	48.0	53.3	58.7	58.7	51.4	42.7	32.8	25.4	41.9
	MEAN DEW POINT	20	18.4	22.2	24.9	27.6	32.7	35.0	43.6	45.8	37.8	30.0	24.3	19.1	30.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	1.1	15.4	24.0	19.6	4.3	0.0	0.0	0.0	64.4	
MAXIMUM ≤ 32°	30	10.0	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.0	19.2	
MINIMUM ≤ 32°	30	30.1	24.4	15.7	6.1	0.4	0.0	0.0	0.0	0.2	3.5	21.9	29.8	132.1	
MINIMUM ≤ 0°	30	3.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	1.0	4.7	
H/C	NORMAL HEATING DEG. DAYS	30	1194	860	656	409	178	33	12	1	73	367	792	1125	5700
	NORMAL COOLING DEG. DAYS	30	0	0	0	2	44	232	394	318	100	1	0	0	1091
RH	NORMAL (PERCENT)	30	72	64	52	44	40	30	34	38	40	47	60	69	49
	HOUR 05 LST	30	79	74	65	59	56	44	49	52	54	60	71	78	62
	HOUR 11 LST	30	65	55	43	36	32	24	29	32	34	39	51	61	42
	HOUR 17 LST	30	63	49	36	29	26	19	22	24	27	33	48	59	36
	HOUR 23 LST	30	77	69	58	49	44	32	37	41	43	52	66	74	54
S	PERCENT POSSIBLE SUNSHINE	56	61	65	65	70	73	81	79	77	79	74	63	61	71
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	58	2.7	1.8	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.0	8.2
	THUNDERSTORMS	58	0.1	0.3	0.8	2.1	4.7	4.8	7.4	8.2	5.3	1.5	0.4	0.1	35.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	50	4.9	5.0	5.0	4.8	4.4	3.2	3.3	3.4	2.9	3.4	4.2	4.5	4.1
	MIDNIGHT-MIDNIGHT (OKTAS)	32	4.6	4.4	4.6	4.3	4.0	3.0	3.2	3.3	2.7	3.2	4.0	4.3	3.8
	MEAN NO. DAYS WITH:														
	CLEAR	51	9.1	7.6	8.0	7.9	9.6	14.9	13.7	13.1	16.0	14.7	10.4	9.6	134.6
PARTLY CLOUDY	51	7.0	7.4	8.6	9.4	10.7	9.4	11.2	11.2	8.1	7.6	7.4	7.6	105.6	
CLOUDY	51	14.8	13.3	14.4	12.7	10.7	5.7	5.5	6.1	5.3	8.0	11.6	13.1	121.2	
PR	MEAN STATION PRESSURE (IN)	30	25.20	25.19	25.10	25.10	25.10	25.10	25.20	25.20	25.20	25.20	25.21	25.30	25.17
	MEAN SEA-LEVEL PRES. (IN)	19	30.23	30.10	29.97	29.89	29.83	29.81	29.87	29.91	29.94	30.03	30.13	30.22	29.99
WINDS	MEAN SPEED (MPH)	57	5.8	6.7	8.4	9.4	9.6	9.8	9.6	9.3	9.2	8.1	6.9	6.1	8.2
	PREVAIL. DIR (TENS OF DEGS)														
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	7	36	41	53	49	45	48	45	45	40	44	37	35	53
	DIR. (TENS OF DEGS)		25	20	34	27	20	30	35	31	04	21	13	31	34
	YEAR OF OCCURRENCE		1999	1998	2001	2000	2002	1999	2002	2002	2002	1997	1997	2000	MAR 2001
	MAXIMUM 5-SECOND:														
SPEED (MPH)	7	45	55	60	60	59	55	68	64	48	54	45	43	68	
DIR. (TENS OF DEGS)		23	19	34	16	19	31	36	26	30	22	25	31	36	
YEAR OF OCCURRENCE		1999	1998	2001	2003	2002	1999	2002	1999	2002	1997	2003	2000	JUL 2002	
PRECIPITATION	NORMAL (IN)	30	0.60	0.50	1.00	0.86	0.98	0.41	0.66	0.84	0.91	1.00	0.71	0.52	8.99
	MAXIMUM MONTHLY (IN)	57	2.46	1.56	2.02	2.15	2.04	2.07	1.92	3.48	2.84	3.45	2.00	1.89	3.48
	YEAR OF OCCURRENCE		1957	1948	1979	1997	1995	1969	1983	1957	1997	1972	1983	1951	AUG 1957
	MINIMUM MONTHLY (IN)	57	T	T	0.02	0.06	T	T	0.01	0.04	0.00	0.00	0.01	0.00	0.00
	YEAR OF OCCURRENCE		1961	1972	1972	1958	1970	1980	1994	1956	1952	1952	1976	1976	OCT 1952
	MAXIMUM IN 24 HOURS (IN)	57	0.72	0.81	1.15	1.33	1.13	1.57	1.42	1.68	1.35	1.24	0.83	1.16	1.68
	YEAR OF OCCURRENCE		2000	1996	1993	1965	1983	1969	1974	1997	1965	1957	1983	1951	AUG 1997
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.6	5.4	7.8	7.1	7.1	4.0	5.5	6.3	6.5	6.2	6.0	5.6	74.1	
PRECIPITATION ≥ 1.00	30	0.0	0.0	*	0.0	0.0	0.0	*	0.1	0.0	0.0	0.0	0.0	0.1	
SNOWFALL	NORMAL (IN)	30	6.0	3.2	2.8	1.5	0.2	0.0	0.0	0.0	0.7	2.3	4.8	21.5	
	MAXIMUM MONTHLY (IN)	57	33.7	18.4	14.9	14.3	5.0	T	T	T	3.1	6.1	12.1	19.0	33.7
	YEAR OF OCCURRENCE		1957	1948	1948	1975	1979	1997	2001	1993	1965	1975	1964	1983	JAN 1957
	MAXIMUM IN 24 HOURS (IN)	57	9.1	9.0	6.1	8.9	5.0	T	T	T	3.1	6.1	8.4	6.3	9.1
	YEAR OF OCCURRENCE		1957	1989	1948	1975	1979	1997	2001	1993	1965	1975	1954	1998	JAN 1957
	MAXIMUM SNOW DEPTH (IN)	55	16	12	8	7	1	0	0	0	2	5	8	11	16
	YEAR OF OCCURRENCE		1957	1957	1960	1975	1979				1965	1975	1954	1983	JAN 1957
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	2.2	1.0	0.9	0.5	0.1	0.0	0.0	0.0	0.0	0.2	0.8	1.8	7.5	

PRECIPITATION (inches) 2003 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	1.20	0.40	0.81	1.03	0.01	0.14	1.53	0.48	0.38	0.72	1.18	0.32	8.20
1975	0.53	0.49	1.74	1.38	1.23	0.43	1.39	0.09	0.16	0.85	0.39	0.50	9.18
1976	0.13	0.81	0.75	0.40	1.49	0.14	0.20	0.31	0.67	0.32	0.04	0.01	5.27
1977	0.37	0.06	0.50	0.54	0.59	0.04	0.89	0.59	0.52	0.50	0.70	0.38	5.68
1978	1.08	0.64	1.19	1.19	0.55	0.01	0.25	0.54	0.49	0.03	0.62	1.30	7.89
1979	1.36	0.63	2.02	0.42	1.45	0.78	0.08	0.61	0.01	0.25	1.02	0.27	8.90
1980	0.57	1.10	1.77	0.53	1.17	T	0.96	1.39	0.58	1.31	0.52	0.24	10.14
1981	0.44	0.16	1.35	0.56	1.49	0.17	0.41	0.82	0.25	2.06	0.47	0.60	8.78
1982	0.29	0.41	0.79	0.09	0.75	0.21	0.35	0.94	2.81	0.83	0.48	0.27	8.22
1983	0.50	0.64	1.59	0.90	1.68	1.54	1.92	0.73	1.11	0.36	2.00	1.85	14.82
1984	0.28	0.11	1.57	1.21	0.55	1.68	0.62	1.77	0.34	2.65	0.38	0.43	11.59
1985	0.51	0.26	0.92	1.78	1.09	0.39	1.21	0.24	1.67	2.32	1.10	0.73	12.22
1986	0.13	0.33	0.25	0.71	1.15	0.15	0.94	0.97	1.52	1.22	1.02	0.47	8.86
1987	0.30	1.21	1.95	0.46	1.51	0.23	1.51	0.83	0.13	0.65	1.92	0.83	11.53
1988	1.07	0.21	0.72	0.99	1.10	0.21	0.18	1.37	0.76	0.02	1.02	0.20	7.85
1989	0.98	1.33	0.51	0.23	0.39	0.24	0.27	1.01	0.33	0.14	T	0.08	5.51
1990	0.59	0.55	1.07	0.71	0.05	0.26	0.96	0.49	1.23	0.95	0.57	0.98	8.41
1991	0.92	0.13	0.70	0.87	0.20	0.30	0.40	0.57	2.30	1.20	1.10	0.54	9.23
1992	0.24	0.35	1.71	0.15	1.81	0.17	1.03	0.84	0.33	1.45	0.76	0.35	9.19
1993	1.36	1.09	1.72	1.30	1.99	0.03	0.04	1.42	0.41	1.34	0.41	0.57	11.68
1994	0.23	0.56	0.25	1.81	0.19	0.04	0.01	0.48	1.50	0.58	0.69	0.64	6.98
1995	0.62	0.52	1.74	0.96	2.04	1.32	0.87	0.47	0.66	0.24	0.20	0.55	10.19
1996	0.65	1.07	0.53	0.90	0.99	0.58	0.77	0.15	1.53	1.35	1.01	0.53	10.06
1997	0.63	0.34	0.53	2.15	1.53	0.29	0.28	2.67	2.84	1.20	0.62	0.14	13.22
1998	0.47	0.48	1.36	0.75	0.21	0.55	1.21	0.61	1.44	1.36	0.42	0.26	9.12
1999	0.09	0.28	0.03	2.06	0.68	0.60	0.51	2.22	1.01	0.17	0.18	0.26	8.09
2000	1.35	0.70	1.26	0.32	0.43	0.34	0.20	0.60	0.60	1.18	0.35	0.18	7.51
2001	0.43	0.67	0.98	0.58	0.57	T	1.20	1.46	0.15	0.99	1.06	0.31	8.40
2002	0.25	0.09	0.64	0.18	0.51	0.08	0.13	1.15	2.54	1.27	0.81	0.22	7.87
2003	0.13	1.03	0.74	0.22	1.88	0.10	0.02	0.40	1.05	0.11	1.06	0.57	7.31
POR= 111 YRS	0.61	0.60	0.84	0.78	0.80	0.44	0.62	1.04	0.87	0.91	0.63	0.51	8.65

WBAN : 23066

AVERAGE TEMPERATURE (°F) 2003 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	16.9	19.9	48.2	51.0	65.0	74.9	78.3	75.6	66.4	56.2	39.6	27.1	51.6
1975	20.0	33.0	41.0	46.4	57.1	67.5	78.3	75.4	67.1	53.5	36.2	27.4	50.2
1976	21.7	38.2	38.7	51.9	61.8	70.4	79.6	75.3	66.9	51.2	39.1	27.6	51.9
1977	23.9	37.1	40.8	56.9	63.7	79.1	80.2	78.3	70.2	58.2	40.3	33.3	55.2
1978	29.4	34.4	46.7	52.3	58.8	73.0	78.4	74.5	65.7	54.7	40.2	16.0	52.0
1979	16.6	23.5	41.1	52.5	60.3	71.0	78.7	74.6	72.0	58.9	33.2	26.9	50.8
1980	32.6	39.2	40.9	51.4	59.1	74.0	78.6	75.3	67.9	53.8	42.3	40.1	54.6
1981	36.8	37.9	44.0	56.8	60.9	76.4	79.4	76.8	69.2	50.7	41.6	31.3	55.2
1982	26.0	34.7	46.0	51.3	61.4	72.2	79.0	78.2	67.5	51.9	41.2	33.0	53.5
1983	34.3	40.9	45.9	48.7	58.7	69.8	78.3	80.4	71.4	58.2	42.1	30.5	54.9
1984	20.7	31.7	44.4	49.0	66.2	70.1	78.0	76.6	68.3	50.2	40.8	32.6	52.4
1985	31.1	32.0	43.9	54.5	63.6	73.0	77.6	77.1	62.4	52.8	38.8	31.9	53.2
1986	34.2	40.4	49.0	52.5	60.6	74.3	76.0	75.6	63.2	51.5	40.8	32.4	54.2
1987	27.4	36.8	40.1	54.5	61.2	73.5	75.2	72.9	66.2	56.8	39.6	27.9	52.7
1988	17.4	29.2	41.0	53.1	60.9	76.5	80.6	76.2	64.5	58.9	40.7	30.0	52.4
1989	20.2	27.7	47.5	57.0	63.8	71.0	80.5	74.4	68.3	54.9	40.6	29.2	52.9
1990	28.5	35.4	46.8	55.7	61.3	75.2	78.0	76.6	69.7	53.2	39.5	20.6	53.4
1991	17.6	32.0	42.0	48.8	62.0	72.5	77.6	76.2	66.5	55.0	37.7	26.2	51.2
1992	19.9	37.6	47.2	59.0	64.5	71.2	75.1	75.1	67.7	57.8	35.9	24.5	53.0
1993	31.9	36.2	45.6	50.0	61.9	70.1	76.7	73.2	65.9	51.7	35.6	29.2	52.3
1994	31.7	34.2	47.4	53.2	65.3	77.8	81.3	79.4	68.3	52.9	37.1	33.1	55.1
1995	33.7	43.4	46.2	50.6	56.9	67.8	76.1	79.0	68.5	53.3	43.6	35.3	54.5
1996	30.1	40.2	44.9	51.0	64.2	73.3	79.2	77.6	63.0	51.3	39.9	30.7	53.8
1997	30.6	34.2	45.0	46.5	62.2	72.7	76.2	74.0	66.4	51.7	38.2	28.2	52.2
1998	33.5	35.8	41.8	48.8	62.1	67.8	79.1	76.8	70.0	53.3	40.8	25.6	53.0
1999	32.9	37.4	48.5	47.8	58.7	70.6	77.6	73.6	63.5	54.2	43.0	30.3	53.2
2000	32.8	39.5	43.4	56.4	65.8	73.1	80.1	78.4	67.2	54.4	32.8	30.8	54.6
2001	28.0	36.2	45.3	53.8	64.3	74.1	78.9	75.7	69.7	55.0	43.7	28.3	54.4
2002	27.9	30.6	40.0	56.2	62.8	76.0	81.8	75.3	65.6	51.0	37.7	32.3	53.1
2003	35.3	34.9	44.4	53.0	63.1	72.2	84.1	78.2	65.3	57.5	36.6	31.2	54.7
POR= 111 YRS	26.3	33.7	43.1	52.2	61.8	72.0	78.3	75.6	66.9	54.2	39.7	28.6	52.7

HEATING DEGREE DAYS (base 65°F) 2003 GRAND JUNCTION, CO (GJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0	0	60	266	756	1167	1387	888	736	551	249	51	6111
1975-76	0	0	35	358	858	1161	1335	775	807	386	122	25	5862
1976-77	0	0	41	421	769	1153	1267	775	743	250	94	0	5513
1977-78	0	1	17	214	736	975	1098	852	561	373	210	9	5046
1978-79	0	6	95	313	737	1510	1493	1154	732	377	192	37	6646
1979-80	0	3	0	209	945	1175	999	741	740	405	195	4	5416
1980-81	0	2	21	359	674	765	864	754	645	247	153	15	4499
1981-82	0	0	12	439	696	1039	1203	841	581	405	136	6	5358
1982-83	2	0	61	397	704	983	946	668	586	482	238	22	5089
1983-84	0	0	27	208	678	1064	1366	959	631	474	89	44	5540
1984-85	0	0	54	452	719	996	1044	919	646	310	81	12	5233
1985-86	0	0	139	371	779	1018	949	685	489	366	168	3	4967
1986-87	0	0	130	414	718	1001	1159	785	765	314	143	0	5429
1987-88	0	6	34	248	754	1147	1469	1031	741	350	172	8	5960
1988-89	0	0	106	183	724	1078	1379	1038	534	258	113	8	5421
1989-90	0	0	40	316	729	1103	1124	820	557	271	139	20	5119
1990-91	0	0	28	360	759	1371	1464	919	706	478	136	18	6239
1991-92	0	2	37	304	815	1193	1390	788	540	195	53	8	5325
1992-93	0	6	25	222	868	1245	1018	799	597	446	144	33	5403
1993-94	4	0	59	410	875	1102	1025	853	540	360	64	0	5292
1994-95	0	0	24	368	832	984	962	596	578	425	256	47	5072
1995-96	8	0	73	357	634	914	1073	712	614	415	88	2	4890
1996-97	0	0	135	421	748	1055	1056	857	613	547	122	4	5558
1997-98	0	0	42	412	799	1138	970	813	709	478	137	55	5553
1998-99	0	0	9	355	715	1217	987	767	501	508	219	33	5311
1999-00	0	0	88	331	651	1067	992	732	663	256	100	1	4881
2000-01	0	0	58	339	959	1053	1140	802	605	333	105	31	5425
2001-02	0	0	23	316	633	1130	1144	955	767	259	149	6	5382
2002-03	0	1	55	426	817	1010	915	835	631	358	163	1	5212
2003-	0	0	66	235	847	1040							

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COOLING DEGREE DAYS (base 65°F) 2003 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0	0	0	1	73	335	420	335	109	0	0	0	1273
1975	0	0	0	0	9	133	419	328	106	9	0	0	1004
1976	0	0	0	0	32	195	460	324	103	0	0	0	1114
1977	0	0	0	16	60	429	477	420	180	10	0	0	1592
1978	0	0	0	0	25	258	420	308	123	1	0	0	1135
1979	0	0	0	6	52	225	428	310	215	27	0	0	1263
1980	0	0	0	1	16	280	427	325	115	19	0	0	1183
1981	0	0	0	9	31	367	456	375	143	0	0	0	1381
1982	0	0	0	0	33	229	443	415	144	0	0	0	1264
1983	0	0	0	0	49	171	421	483	226	3	0	0	1353
1984	0	0	0	0	134	200	408	368	159	0	0	0	1269
1985	0	0	0	4	45	261	396	382	67	0	0	0	1155
1986	0	0	0	0	39	289	348	334	82	0	0	0	1092
1987	0	0	0	5	30	262	324	256	76	2	0	0	955
1988	0	0	0	0	51	360	489	357	98	4	0	0	1359
1989	0	0	0	26	85	195	489	300	145	11	0	0	1251
1990	0	0	0	1	34	331	412	368	174	3	0	0	1323
1991	0	0	0	0	50	247	398	356	88	0	0	0	1139
1992	0	0	0	21	43	203	319	328	114	7	0	0	1035
1993	0	0	0	0	56	193	371	260	92	6	0	0	978
1994	0	0	0	13	82	388	514	454	126	0	0	0	1577
1995	0	0	0	0	9	138	362	444	185	3	0	0	1141
1996	0	0	0	1	67	256	448	396	82	4	0	0	1254
1997	0	0	0	0	44	240	353	285	93	8	0	0	1023
1998	0	0	0	0	51	148	445	375	163	0	0	0	1182
1999	0	0	0	0	27	204	401	274	45	4	0	0	955
2000	0	0	0	5	131	249	476	421	129	15	0	0	1426
2001	0	0	0	3	89	311	437	341	170	13	0	0	1364
2002	0	0	0	0	85	341	526	327	80	0	0	0	1359
2003	0	0	0	2	111	226	596	414	83	7	0	0	1439

SNOWFALL (inches) 2003 GRAND JUNCTION, CO (GJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0.0	0.0	0.0	T	0.1	4.6	7.9	4.4	8.8	14.3	1.3	0.0	41.4
1975-76	0.0	0.0	0.0	6.1	3.9	7.2	1.7	4.0	6.8	0.2	0.0	0.0	29.9
1976-77	0.0	0.0	0.0	0.0	0.0	T	0.1	4.2	T	2.3	1.7	0.0	8.3
1977-78	0.0	0.0	0.0	T	3.3	2.5	12.0	2.5	0.6	T	T	0.0	20.9
1978-79	0.0	0.0	0.0	0.0	2.9	11.8	18.7	9.6	3.4	1.1	5.0	0.0	52.5
1979-80	0.0	0.0	0.0	0.0	8.2	3.5	2.2	0.5	7.3	0.2	0.0	0.0	21.9
1980-81	0.0	0.0	0.0	0.0	T	0.0	3.9	0.8	1.2	T	0.0	0.0	5.9
1981-82	0.0	0.0	0.0	0.5	3.3	3.4	3.4	4.0	0.8	T	0.0	0.0	15.4
1982-83	0.0	0.0	0.0	T	T	1.9	6.1	3.1	1.5	2.2	T	0.0	14.8
1983-84	0.0	0.0	0.0	0.0	4.2	19.0	3.7	0.6	6.1	2.9	0.0	0.0	36.5
1984-85	0.0	0.0	0.0	0.7	2.0	2.7	5.0	2.7	5.6	0.1	0.0	0.0	18.8
1985-86	0.0	0.0	0.0	0.0	4.6	4.4	1.8	0.7	T	0.2	T	0.0	11.7
1986-87	0.0	0.0	0.0	2.2	1.2	1.0	3.0	5.5	9.4	0.6	T	0.0	22.9
1987-88	0.0	0.0	0.0	0.0	1.1	7.1	12.2	2.2	4.3	0.0	0.0	0.0	26.9
1988-89	0.0	0.0	0.0	0.0	0.9	3.1	10.2	16.0	1.1	T	T	0.0	31.3
1989-90	0.0	0.0	0.0	0.0	0.0	1.1	6.2	8.6	1.8	0.8	0.0	0.0	18.5
1990-91	0.0	0.0	0.0	0.0	1.5	5.1	12.7	0.3	3.7	4.7	0.0	0.0	28.0
1991-92	0.0	0.0	T	2.5	1.9	7.6	2.7	1.9	T	0.0	T	0.0	16.6
1992-93	0.0	0.0	0.0	0.0	2.0	4.4	6.0	8.4	0.0	0.4	T	0.0	21.2
1993-94	0.0	T	0.0	0.0	0.6	5.9	1.1	4.6	0.3	T	0.0	0.0	12.5
1994-95	0.0	0.0	0.0	T	5.4	2.2	4.0	1.1	3.7	T	T	0.0	16.4
1995-96	0.0	0.0	T	1.2	T	3.7	2.1	0.5	3.0	T	0.0	0.0	10.5
1996-97	0.0	0.0	0.0	1.1	4.2	3.5	4.9	3.2	1.2	6.5	T	T	24.6
1997-98	0.0	T	0.0	0.5	T	1.7	3.8	0.5	3.8	0.1	0.0	T	10.4
1998-99	0.0	0.0	T	0.0	2.5	7.0	0.5	1.4	0.0	3.8	T	0.0	15.2
1999-00	0.0	T	0.0	0.0	T	3.3	3.1	0.6	6.2	0.0	0.0	0.0	13.2
2000-01	0.0	0.0	0.0	0.0	3.6	1.5	4.3	3.3	3.7	0.0	0.0	0.0	16.4
2001-02	T	0.0	T	0.0	2.8	3.3	4.4	0.8	6.2	0.0	0.0	0.0	17.5
2002-03	0.0	0.0	T	0.0	0.3	1.9	T	4.1	3.9	0.6	0.0	0.0	10.8
2003-	0.0	0.0	0.0	0.0	3.7	3.7							
POR= 56 YRS	0.0	T	0.1	0.5	2.5	4.9	6.5	3.7	3.6	1.2	0.2	0.0	23.2

WBAN : 23066

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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2003
GRAND JUNCTION,
COLORADO (GJT)

Grand Junction is located at the junction of the Colorado and Gunnison Rivers. It is on the west slope of the Rockies, in a large mountain valley. The area has a climate marked by the wide seasonal range usual to interior localities at this latitude. Thanks, however, to the protective topography of the vicinity, sudden and severe weather changes are very infrequent. The valley floor slopes from 4,800 feet near Palisade to 4,400 feet at the west end near Fruita. Mountains are on all sides at distances of from 10 to 60 miles and reach heights of 9,000 to over 12,000 feet.

This mountain valley location, with attendant valley breezes, provides protection from spring and fall frosts. This results in a growing season averaging 191 days in the city. This varies considerably in the outlying districts. It is about the same in the upper valley around Palisade, and 3 to 4 weeks shorter near the river west of Grand Junction. The growing season is sufficiently long to permit commercial growth of almost all fruits except citrus varieties. Summer grazing of cattle and sheep on nearby mountain ranges is extensive.

The interior, continental location, ringed by mountains on all sides, results in quite low precipitation in all seasons. Consequently, agriculture is dependent on irrigation. Adequate supplies of water are available from mountain snows and rains. Summer rains occur chiefly as

scattered light showers and thunderstorms which develop over nearby mountains. Winter snows are fairly frequent, but are mostly light and quick to melt. Even the infrequent snows of from 4 to 8 inches seldom remain on the ground for prolonged periods. Blizzard conditions in the valley are extremely rare.

Temperatures above 100 degrees are infrequent, and about one-third of the winters have no readings below zero. Summer days with maximum temperatures in the middle 90s and minimums in the low 60s are common. Relative humidity is very low during the summer, with values similar to other dry locations such as the southern parts of New Mexico and Arizona. Spells of cold winter weather are sometimes prolonged due to cold air becoming trapped in the valley. Winds are usually very light during the coldest weather. Changes in winter are normally gradual, and abrupt changes are much less frequent than in eastern Colorado. Cold waves are rare. Sunny days predominate in all seasons.

The prevailing wind is from the east-southeast due to the valley breeze effect. The strongest winds are associated with thunderstorms or with pre-frontal weather. They usually are from the south or southwest.

STATION LOCATION

GRAND JUNCTION, COLORADO

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	EXTREME	PSYCHROMETER	SUNSHINE	TIPPING GAUGE	WEIGHING	8 INCH	HYGROMETER		
*NOTE:																	
<u>AIRPORT</u>																	
Municipal Airport Municipal Airport	11/28/45	2/28/50	NA	39°07'	108°32'	4849	32 b24	5	5	Unk	a4	a4	3		a. Installed 3/16/46. b. Effective 12/17/46.		
Terminal Building Municipal Airport + +Walker Field (effective 10/19/74)	2/28/50	04/01/96	375' SE	39°07'	108°32'	4849 d4825 h4855 i4843 p4842	f22 n35	11 c6 q35	11 c6 q35	Unk e8 m45	j4 m45	4 c5 q34	k3 q33	g4 l4	c. Moved 500' SE 11/3/60. d. Effective 11/3/60. e. Effective 6/26/61. f. Moved 2400' SE 9/30/61. g. Commissioned 2050' ESE of thermometer site 9/22/63. h. Effective 9/22/63. i. Effective 12/12/68. j. Installed 10/31/73. k. Installed 7/15/80. l. Minor move 7/25/85. m. Moved to roof of NWS bldg 01/19/87. n. Effective 04/06/89./12/68 p. Effective 06/06/89. q. Moved to HMO roof 08/01/89.		
Walker Field	04/01/96	Present	NA	39°08'	108°32'	r4823								S	r. ASOS Commissioned 04/01/96. r. Ground elevation.		

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* NOTES: For earlier station history see previous editions.