

1998

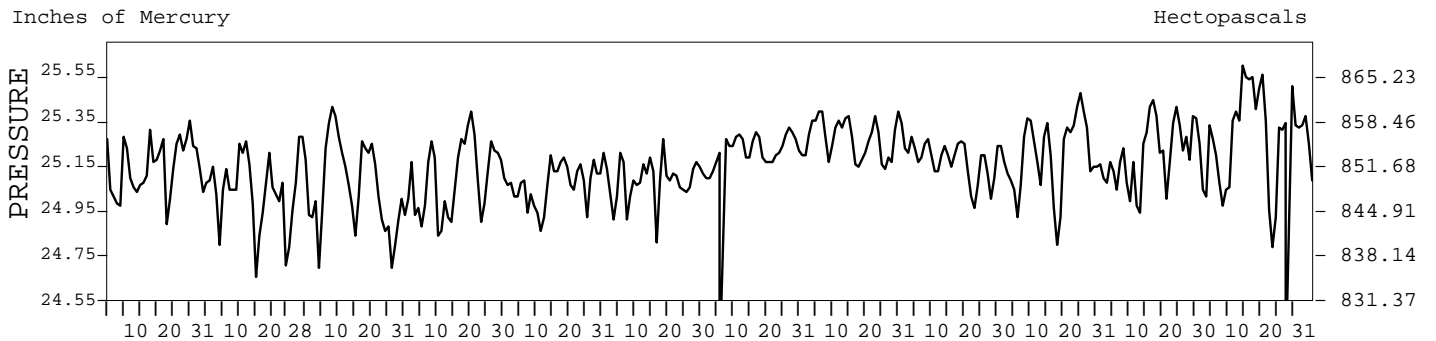
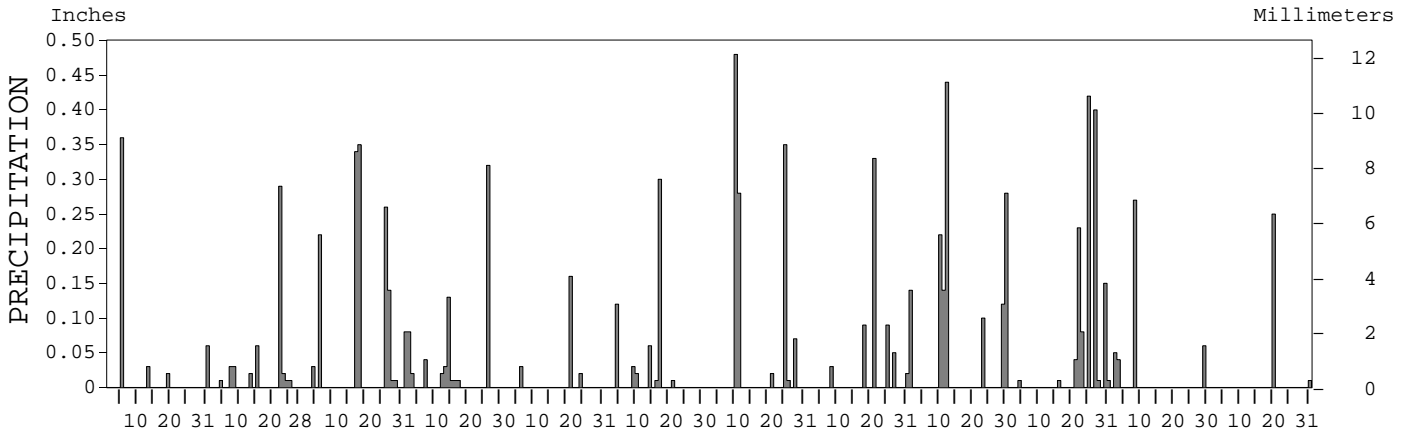
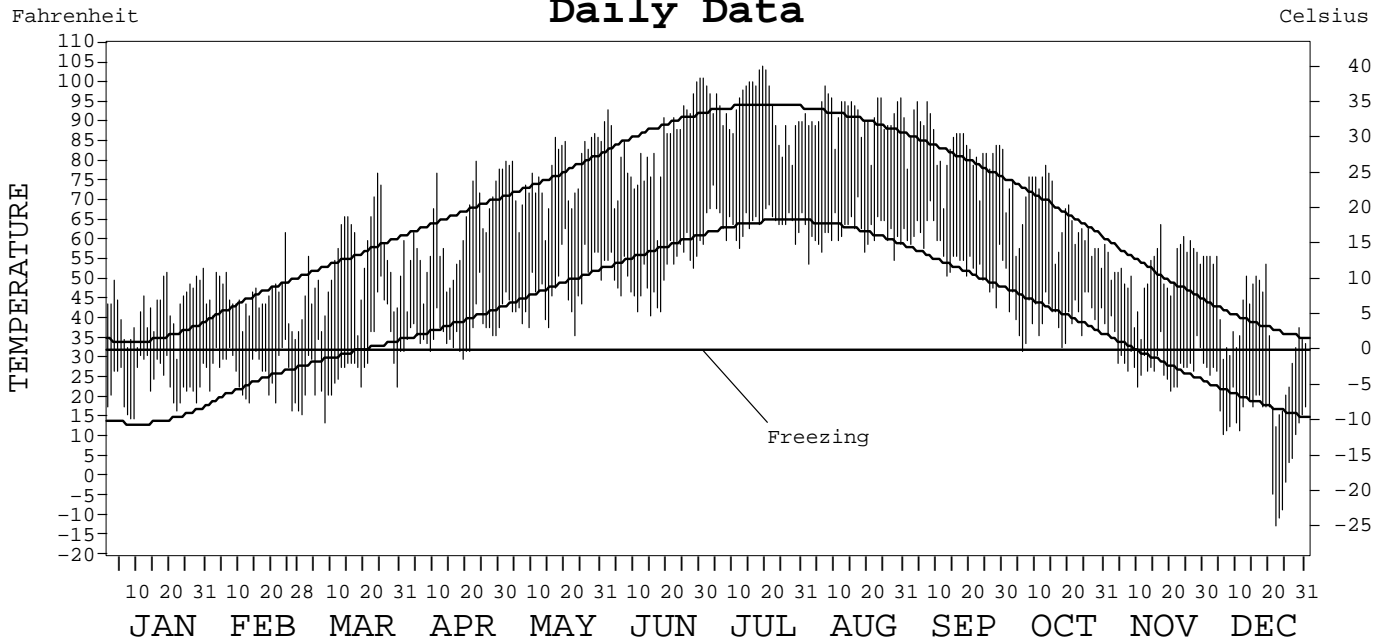
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-7674

GRAND JUNCTION,
COLORADO (GJT)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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METEOROLOGICAL DATA FOR 1998

GRAND JUNCTION, CO (GJT)

LATITUDE: 39° 08' 03" N LONGITUDE: 108° 32' 15" W ELEVATION (FT): GRND: 4824 BARO: 4828 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	43.2	45.2	54.1	61.2	76.9	83.9	93.5	91.8	83.8	65.7	52.3	37.6	65.8	
	HIGHEST DAILY MAXIMUM	53	62	77	80	87	101	104	99	95	79	64	56	104	
	DATE OF OCCURRENCE	30	24	24	23	29	30	19	7	07+	13	17	04+	JUL 19	
	MEAN DAILY MINIMUM	23.7	26.3	29.5	36.4	47.2	51.7	64.7	61.8	56.1	40.9	29.3	13.5	40.1	
	LOWEST DAILY MINIMUM	15	17	14	30	36	41	58	54	43	32	22	-12	-12	
	DATE OF OCCURRENCE	09+	28+	08	19	23	15	12	2	28	06	20	22	DEC 22	
	AVERAGE DRY BULB	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	
	MEAN WET BULB	29.5	32.0	35.2	40.8	48.0			58.4	55.5	44.1	34.8			
	MEAN DEW POINT	24.3	26.7	26.0	31.1	33.1			44.4	43.9	34.0	27.4			
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	10	21	23	5	0	0	0	0	59
	MAXIMUM ≤ 32°	1	0	0	0	0	0	0	0	0	0	0	9	10	10
	MINIMUM ≤ 32°	31	24	23	6	0	0	0	0	0	1	24	31	140	140
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	5	5	5
H/C	HEATING DEGREE DAYS	970	813	709	478	137	55	0	9	355	715	1217	5458		
	COOLING DEGREE DAYS	0	0	0	0	51	148	445	375	163	0	0	1182		
RH	MEAN (PERCENT)	73	72	58	56	36	36	39	35	45	55	64	69	53	
	HOUR 05 LST	81	83	75	75	54	50	55	52	61	69	75	79	67	
	HOUR 11 LST	65	62	50	47	29	27	33	29	37	46	53	62	45	
	HOUR 17 LST	64	60	40	37	24	25	27	23	30	43	50	60	40	
	HOUR 23 LST	78	80	64	65	39	41	44	36	50	62	71	74	59	
S	PERCENT POSSIBLE SUNSHINE	55	40	71	74	79	82	91	91	83	70	71	69	73	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	2	1	0	0	0	1	0	0	3	2	1	12	
	THUNDERSTORMS	0	0	1	1	5	7	13	9	5	1	0	0	42	
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.)	25.13	25.02	25.05	25.07	25.06	25.07		25.25	25.15	25.17	25.19			
	MEAN SEA-LEVEL PRESS. (IN.)	30.05	29.89	29.90	29.88	29.78	29.77		29.95	29.86	29.97	30.07			
WINDS	RESULTANT SPEED (MPH)	1.9	1.2	1.9	0.7	2.6	0.9		2.0	1.8	2.5	1.2			
	RES. DIR. (TENS OF DEGS.)	09	06	11	14	17	19		12	10	10	09			
	MEAN SPEED (MPH)	5.2	6.0	7.3	7.9	9.7	8.9	8.7	8.3	8.0	7.6	5.6	5.0	7.3	
	PREVAIL. DIR. (TENS OF DEGS.)	10	11	12	11	11	11	12	11	10	10	11	07	11	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	41	34	40	37	38	36	38	38	32	32	20	41	
	DIR. (TENS OF DEGS.)	19	20	25	19	27	24	13	14	17	29	25	18	20	
	DATE OF OCCURRENCE	19	24	06	11	21+	07	03	24	30	04+	17	19	FEB 24	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	33	55	45	47	48	45	51	47	43	40	39	25	55	
DIR. (TENS OF DEGS.)	23	19	26	17	24	23	25	12	16	28	26	18	19		
DATE OF OCCURRENCE	19	24	06	11	19	07+	10	24	30	04+	17	19	FEB 24		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	0.36	0.31	0.69	0.32	0.16	0.31	0.76	0.33	0.57	0.42	0.27	0.25	0.76	
	DATE OF OCCURRENCE	05	22-23	17-18	26	21	16-17	10-11	21	11-12	25-26	08	20	JUL 10-11	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	4	9	8	11	3	7	6	6	7	10	4	2	77	
PRECIPITATION ≥ 0.10	1	1	5	2	1	2	3	1	7	4	1	1	29		
PRECIPITATION ≥ 1.00	0	0	0	0	0	0	0	0	0	0	0	0	0		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	3.8	0.5	3.8	0.1	0.0	T	0.0	0.0	T	0.0	2.5	7.0	17.7	
	GREATEST 24-HOUR (IN.)	3.5	0.2	3.4	0.1	0.0	T	0.0	0.0	T	0.0	2.0	6.3	6.3	
	DATE OF OCCURRENCE	05	25+	17-18	02		14			30		08	20	DEC 20	
	MAXIMUM SNOW DEPTH (IN.)	T	T	2	0	0	0	0	0	0	0	1	5	5	
	DATE OF OCCURRENCE	31+	27+	18								09	21	DEC 21	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	1	0	1	0	0	0	0	0	0	0	1	1	4		

NORMALS, MEANS, AND EXTREMES

GRAND JUNCTION, CO (GJT)

LATITUDE: 39° 08' 03" N LONGITUDE: 108° 32' 15" W ELEVATION (FT): GRND: 4824 BARO: 4828 TIME ZONE: MOUNTAIN (UTC+ 7) WBAN: 23066

		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	35.5	45.4	55.6	65.8	76.0	87.7	93.6	90.5	81.1	67.7	51.4	38.7	65.8
	MEAN DAILY MAXIMUM	51	36.2	44.6	54.6	65.0	75.7	87.2	93.0	89.8	81.1	67.7	50.6	39.0	65.4
	HIGHEST DAILY MAXIMUM	52	60	68	81	89	95	105	105	103	100	88	75	64	105
	YEAR OF OCCURRENCE		1971	1986	1971	1992	1956	1990	1976	1995	1995	1963	1977	1980	JUN 1990
	MEAN OF EXTREME MAXS.	51	49.1	58.4	70.7	80.4	89.2	98.3	100.7	98.1	92.7	81.5	65.0	52.4	78.0
	NORMAL DAILY MINIMUM	30	14.5	23.5	31.3	38.5	47.9	57.1	63.9	62.2	52.8	41.6	29.4	18.7	40.1
	MEAN DAILY MINIMUM	51	16.2	23.2	30.9	38.6	48.1	57.1	63.8	61.8	53.0	41.2	28.5	19.0	40.1
	LOWEST DAILY MINIMUM	52	-23	-18	5	11	26	34	44	43	29	18	-2	-17	-23
	YEAR OF OCCURRENCE		1963	1989	1948	1975	1970	1976	1993	1968	1978	1993	1976	1990	JAN 1963
	MEAN OF EXTREME MINS.	51	1.0	7.7	17.5	25.6	34.9	44.5	55.5	53.1	40.5	28.1	15.3	5.1	27.4
	NORMAL DRY BULB	30	25.0	34.5	43.4	52.2	62.0	72.4	78.8	76.4	67.0	54.7	40.4	28.7	53.0
	MEAN DRY BULB	51	26.2	33.8	42.7	51.8	61.8	72.2	78.4	75.8	67.1	54.4	39.6	28.9	52.7
	MEAN WET BULB	15	23.4	29.8	36.1	41.4	48.2	53.6	58.3	58.3	51.5	42.8	32.9	25.2	41.8
	MEAN DEW POINT	15	17.7	22.5	24.9	28.3	33.5	36.1	43.3	45.2	37.9	31.0	24.6	18.8	30.3
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	1.2	14.3	24.8	19.4	4.2	0.0	0.0	0.0	63.9	
MAXIMUM ≤ 32°	30	11.7	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.2	22.0	
MINIMUM ≤ 32°	30	30.3	24.7	17.1	6.6	0.4	0.0	0.0	0.0	0.1	2.9	20.2	29.5	131.8	
MINIMUM ≤ 0°	30	4.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	1.4	6.0	
H/C	NORMAL HEATING DEG. DAYS	30	1240	854	670	389	132	13	0	0	55	332	738	1125	5548
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	39	235	428	353	115	13	0	0	1183
RH	NORMAL (PERCENT)	30	70	60	50	40	36	29	34	37	39	46	58	68	47
	HOUR 05 LST	30	77	71	63	55	51	44	48	51	52	58	70	76	60
	HOUR 11 LST	30	64	53	42	33	30	24	28	32	34	38	50	61	41
	HOUR 17 LST	30	61	47	36	27	24	19	22	24	26	33	46	59	35
	HOUR 23 LST	30	75	66	56	45	40	32	36	39	42	51	64	73	52
S	PERCENT POSSIBLE SUNSHINE	52	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)	53	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	53	0.1	0.3	0.8	2.1	4.8	4.8	7.5	8.0	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)	26	25.20	25.19	25.10	25.10	25.10	25.10	25.20	25.20	25.20	25.20	25.20	25.30	25.17
	MEAN SEA-LEVEL PRES. (IN)	15	30.24	30.10	29.97	29.89	29.83	29.81	29.87	29.91	29.94	30.03	30.11	30.22	29.99
WINDS	MEAN SPEED (MPH)	52	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)	2	28	41	41	40	37	38	36	38	38	44	37	21	44
	DIR. (TENS OF DEGS)		19	20	27	19	27	24	13	14	17	21	13	20	21
	YEAR OF OCCURRENCE		1998	1998	1997	1998	1998	1998	1998	1998	1998	1997	1997	1997	OCT 1997
MAXIMUM 5-SECOND:															
SPEED (MPH)	2	33	55	46	47	48	45	51	47	43	54	41	26	55	
DIR. (TENS OF DEGS)		23	19	27	17	24	23	25	12	16	22	13	20	19	
YEAR OF OCCURRENCE		1998	1998	1997	1998	1998	1998	1998	1998	1998	1997	1997	1997	FEB 1998	
PRECIPITATION	NORMAL (IN)	30	0.56	0.48	0.90	0.75	0.87	0.50	0.65	0.81	0.82	0.98	0.71	0.61	8.64
	MAXIMUM MONTHLY (IN)	52	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)	52	T	T	0.02	0.06	T	T	0.01	0.04		0.00		0.01	0.00
	YEAR OF OCCURRENCE		1961	1972	1972	1958	1970	1980	1994	1956		1952		1976	OCT 1952
	MAXIMUM IN 24 HOURS (IN)	52	0.71	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		1989	1996	1993	1965	1983	1969	1974	1997	1965	1957	1983	1951	AUG 1997
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.4	5.2	7.7	6.6	6.3	4.2	5.8	6.1	6.3	5.6	5.6	6.4	72.2	
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.0	0.0	0.0	*	*	0.0	*	0.0	0.0	0.0	0.0	
SNOWFALL	NORMAL (IN)	30	6.6	3.3	3.7	1.2	0.2	0.0	0.0	0.1	0.7	2.5	5.7	24.0	
	MAXIMUM MONTHLY (IN)	52	33.7	18.4	14.9	14.3	5.0	T	0.0	T	3.1	6.1	12.1	19.0	33.7
	YEAR OF OCCURRENCE		1957	1948	1948	1975	1979	1997		1993	1965	1975	1964	1983	JAN 1957
	MAXIMUM IN 24 HOURS (IN)	52	9.1	9.0	6.1	8.9	5.0	T	0.0	T	3.1	6.1	8.4	6.3	9.1
	YEAR OF OCCURRENCE		1957	1989	1948	1975	1979	1997		1993	1965	1975	1954	1998	JAN 1957
	MAXIMUM SNOW DEPTH (IN)	50	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	2.5	1.0	1.2	0.3	0.1	0.0	0.0	0.0	0.*	0.2	0.8	2.1	8.2	

PRECIPITATION (inches) 1998 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	1.03	0.40	0.67	0.33	0.45	2.07	0.21	0.88	1.45	2.01	0.45	0.36	10.31
1970	0.52	0.05	1.75	0.76	T	0.91	0.60	0.44	0.78	1.56	0.54	0.39	8.30
1971	0.19	0.13	0.02	0.42	1.10	0.03	0.15	1.02	0.58	1.13	0.56	0.67	6.00
1972	0.20	T	0.02	0.11	0.44	0.64	0.03	0.29	0.72	3.45	0.69	0.74	7.33
1973	0.79	0.12	0.65	0.86	1.45	0.87	0.52	0.62	0.33	0.20	0.91	0.62	7.94
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
POR= 106 YRS	0.60	0.58	0.84	0.77	0.79	0.44	0.61	1.01	0.84	0.90	0.60	0.50	8.48

WBAN : 23066

AVERAGE TEMPERATURE (°F) 1998 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	28.5	33.6	38.1	53.8	66.4	67.7	80.3	79.5	69.3	47.4	39.2	32.7	53.0
1970	29.3	40.9	39.8	45.9	63.3	71.4	79.1	78.7	64.1	48.8	41.0	31.9	52.9
1971	27.7	34.1	41.1	52.2	60.1	74.1	80.2	78.5	63.2	52.3	38.4	25.9	52.3
1972	30.0	36.6	46.6	53.3	63.1	74.3	80.2	77.1	68.1	54.0	37.1	22.7	53.6
1973	11.5	29.1	42.1	48.1	61.5	70.5	78.1	77.4	65.7	56.4	41.2	30.1	51.0
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
POR= 106 YRS	26.0	33.6	43.0	52.2	61.8	72.0	78.2	75.6	66.9	54.2	39.8	28.6	52.7

HEATING DEGREE DAYS (base 65°F) 1998 GRAND JUNCTION, CO (GJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0	0	20	545	764	995	1100	671	772	564	115	39	5585
1970-71	0	0	93	495	714	1019	1152	858	734	378	182	4	5629
1971-72	0	0	134	389	792	1204	1076	813	563	346	139	0	5456
1972-73	0	0	31	335	832	1303	1651	999	705	499	139	49	6543
1973-74	0	0	72	266	708	1075	1487	1260	513	415	66	32	5894
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	5903
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-	0	0	9	355	715	1217							

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COOLING DEGREE DAYS (base 65°F) 1998 GRAND JUNCTION, CO (GJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	3	104	124	481	458	158	1	0	0	1329
1970	0	0	0	0	67	238	442	430	72	0	0	0	1249
1971	0	0	0	0	36	284	479	425	86	3	0	0	1313
1972	0	0	0	0	86	288	479	381	130	3	0	0	1367
1973	0	0	0	0	35	222	410	393	101	6	0	0	1167
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

SNOWFALL (inches) 1998 GRAND JUNCTION, CO (GJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	0.6	0.5	4.8	5.2	T	12.4	1.2	0.0	0.0	24.7
1970-71	0.0	0.0	0.0	3.1	T	4.1	3.2	1.5	0.2	1.1	T	0.0	13.2
1971-72	0.0	0.0	0.0	0.5	3.9	10.4	4.0	T	0.0	T	0.0	0.0	18.8
1972-73	0.0	0.0	0.0	5.7	1.3	9.7	12.8	1.2	1.3	2.0	T	0.0	34.0
1973-74	0.0	0.0	0.0	0.0	7.7	5.7	17.0	5.5	T	1.2	0.0	0.0	37.1
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	T	0.1	4.2	T	2.3	1.7	0.0	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-	0.0	0.0	T	0.0	2.5	7.0							
POR= 51 YRS	0.0	T	0.1	0.5	2.6	5.1	6.8	3.9	3.7	1.1	0.2	0.0	24.0

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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
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												AUCI T O M A T I C H E I G H T I N F E E T * *	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND													
							G R O U N D L E V E L	W I N D I N S T R U M E N T	E M P T Y E M P T Y	P R E S S U R E	S U R F A C E	T E M P E R A T U R E	R A I N G A G E	W E I G H T I N G G A G E	8 I N C H R A I N G A G E	H I G H P R E S S U R E	H I G H T E M P E R A T U R E			
<u>COOPERATIVE</u>																				
Home or offices of Frank McClintock and L. F. Ingersoll	4/1884	4/1888	NA	39° 04'	108°34'	4587		Unk									Unk	Broken record during period, exact addresses and dates of service unknown.		
Upstairs office of Dr. S. M. Bradbury 520 Main Street	3/1/92	12/31/98	1 block SW	39° 04'	108°34'	4587		Unk										Window shelter used.		
<u>CITY</u>																				
4th and Main Streets	1/1/99	1/31/14	1.5 blks.W	39° 04'	108°34'	4587	51	43	43			37					37			
5th and Main Streets	1/31/14	3/15/18	1 block E	39° 04'	108°34'	4587	96	82	82			74					74			
Post Office 4th St. and Rood Ave.	3/15/18	3/16/46	2 blks. NW	39° 04'	108°34'	4587	68	60	60			52					52	Office closed and activities transferred to Airport Station, 5.5 miles NE, 3/16/46.		
<u>AIRPORT</u>																				
CAA Quarters Municipal Airport	11/26/45	3/06/47	New Office	39° 07'	108°32'	4849	b24	5	5	NA	NA a4	NA a4	3	NA	NA		NA	a - Installed 3/16/46. b - Effective 12/17/46.		
Weather Bureau Office Municipal Airport	3/06/47	2/28/50	375 ft. W	39° 07'	108°32'	4849	c32	5	5	NA	4	4	3	NA	NA		NA	c - Wind sensor raised 4/15/48		
Terminal Building Municipal Airport (Airport name changed to Walker Field - 3/7/1)	2/28/50	1/19/87	325 ft. SE	39° 07'	108° 32'	4849	e4825	59	11	11	16	NA	4	3 dNA	NA	NA	NA	d - 8 inch gage removed 6/1/51 e - Temp instruments/weighing rain gage moved 11/3/60. f - Sunshine switch moved 7/7/61 g - Wind instrument moved 9/30/61 h - HO61 installed 9/22/63 i - Redefined height 12/12/68 j - Tipping bucket installed 10/31/73. k - 8 inch gage installed 7/15/80 l - HO83 installed 07/25/85		
2775 Crossroads Blvd.	1/19/87	6/27/95	0.9 mi. SW	39° 07'	108° 32'	4843	n35	22	5	5	45	NA m45	4	3	4	NA	NA	m - Tipping bucket to roof of HMO 4/15/87 n - Wind instrument raised 4/6/89. o - Survey adjustment 6/7/89 p - Extreme temp instruments/ rain gages moved to HMO roof 08/01/89.		
792 Eagle Drive (Walker Field)	6/27/95	Present	0.9 mi. NE	39° 07' 39	108° 32' 08	4842 q4824		35	5	5	38	4	4	3	4	NA S	NA	q - ASOS Commissioned 4/1/96. r - Sun. switch moved 6/11/98.		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801. INQUIRIES/COMMENTS CALL: (828) 271-4800

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