

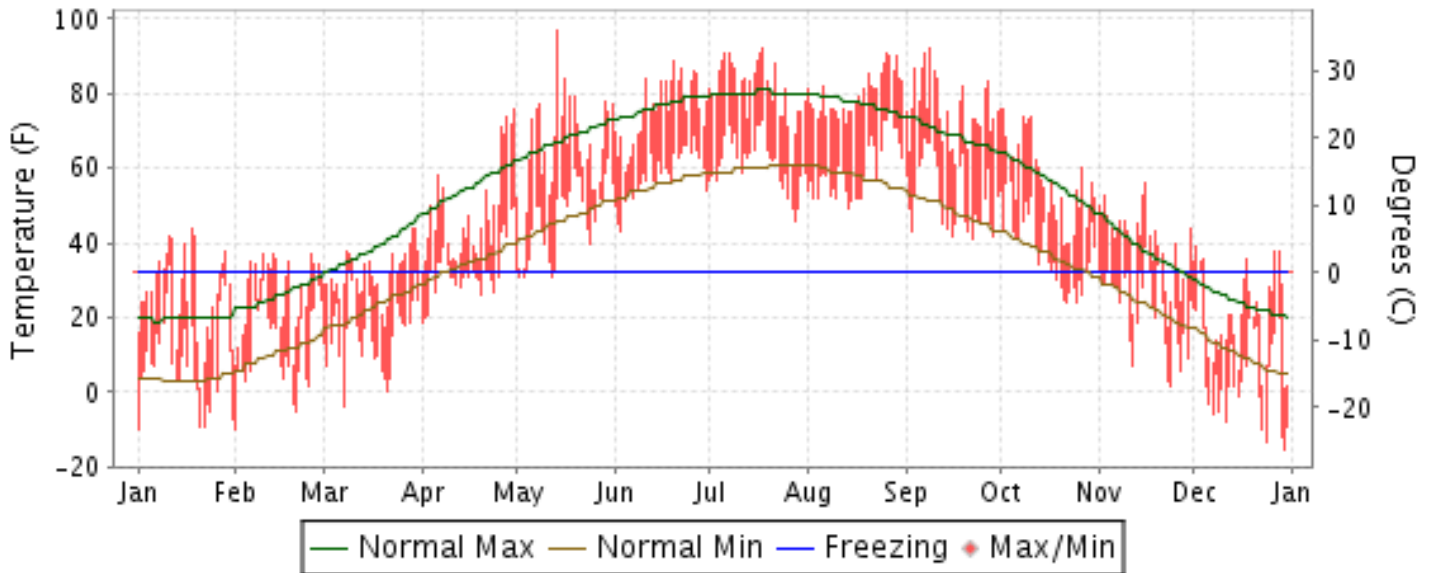


2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

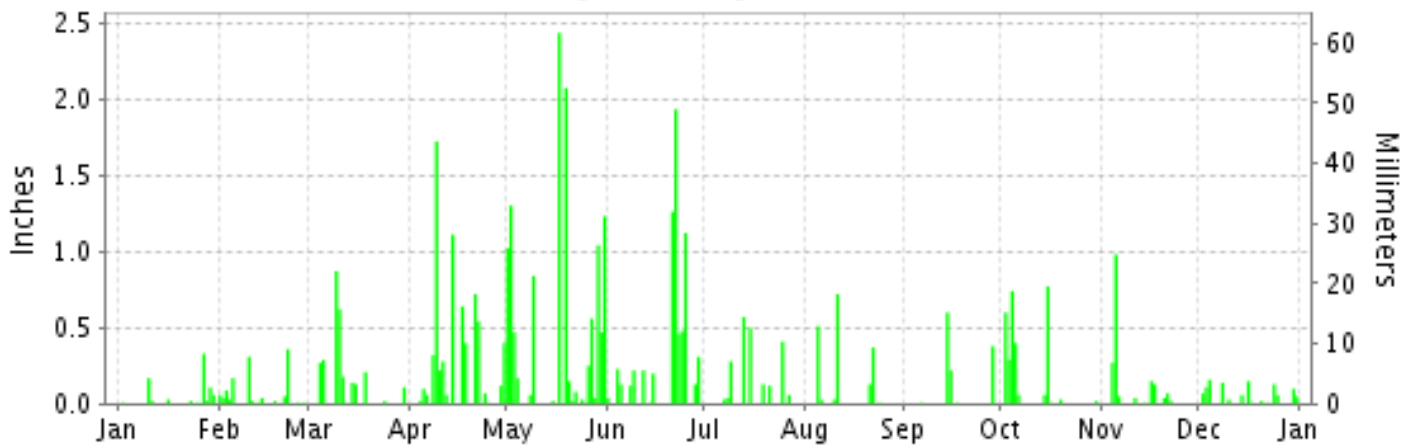
ISSN 0198-2753

ROCHESTER, MINNESOTA (KRST)

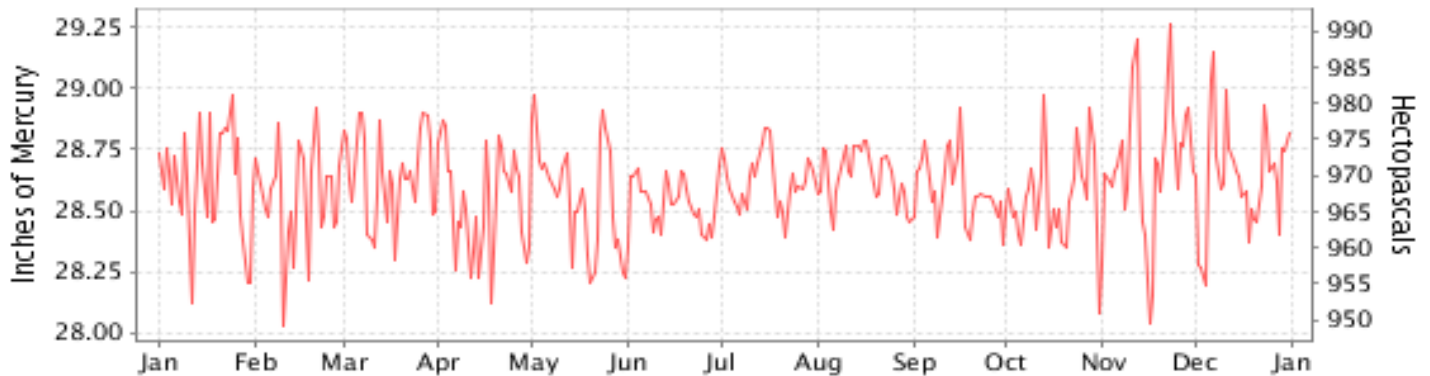
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2013

ROCHESTER (KRST)

LATITUDE: 43° 54'N LONGITUDE: 92° 29'W ELEVATION (FT): GRND: 1304 BARO: 1326 TIME ZONE: CENTRAL (UTC -6) WBAN: 14925

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	26.3	26.6	31.7	47.8	65.0	75.7	81.3	79.9	75.4	57.0	39.5	20.9	52.3	
	HIGHEST DAILY MAXIMUM	44	37	44	76	97	89	92	91	92	76	56	39	97	
	DATE OF OCCURRENCE	18	25+	30+	30	14	20	18	26	09	02+	16	02	MAY 14	
	MEAN DAILY MINIMUM	8.8	12.3	16.0	32.6	46.4	58.2	61.5	59.8	52.6	38.4	22.6	5.4	34.6	
	LOWEST DAILY MINIMUM	-10	-10	-4	19	31	43	46	49	41	24	2	-15	-15	
	DATE OF OCCURRENCE	01	01	07	01	12+	03	28	14	22	25+	24	30	DEC 30	
	AVERAGE DRY BULB	17.5	19.4	23.8	40.2	55.7	67.0	71.4	69.9	64.0	47.7	31.1	13.1	43.4	
	MEAN WET BULB	15.8	18.4	22.2	36.5	50.6	61.3	64.3	64.0	58.1	43.3	28.6	12.3	39.6	
	MEAN DEW POINT	10.4	13.8	16.7	31.9	45.8	57.5	59.8	60.4	54.0	38.1	23.0	7.6	34.9	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	1	0	4	3	2	0	0	0	0	10
	MAXIMUM <= 32°	21	17	18	1	0	0	0	0	0	5	8	24	94	
MINIMUM <= 32°	30	28	29	17	5	0	0	0	0	10	27	31	177		
MINIMUM <= 0°	7	3	2	0	0	0	0	0	0	0	0	11	23		
H/C	HEATING DEGREE DAYS	1465	1268	1266	736	312	60	23	11	120	529	1010	1601	8401	
	COOLING DEGREE DAYS	0	0	0	0	30	126	229	171	100	0	0	0	656	
RH	MEAN (PERCENT)	73	76	73	75	73	74	69	73	72	72	73	76	73	
	HOUR 00 LST	75	78	75	79	79	83	78	84	82	78	75	78	79	
	HOUR 06 LST	76	80	80	84	82	86	84	88	88	83	80	79	83	
	HOUR 12 LST	68	73	67	70	66	66	57	59	59	61	67	73	66	
	HOUR 18 LST	72	74	69	69	65	64	56	63	64	66	70	75	67	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	4	4	7	2	4	3	2	4	1	3	1	3	38	
	THUNDERSTORMS	2	0	0	2	5	7	4	2	0	4	1	0	27	
PR	MEAN STATION PRESS. (IN.)	28.62	28.55	28.65	28.54	28.56	28.53	28.63	28.64	28.59	28.56	28.70	28.64	28.60	
	MEAN SEA-LEVEL PRESS. (IN.)	30.10	30.03	30.12	29.98	29.97	29.92	30.02	30.03	29.99	29.97	30.14	30.12	30.03	
WINDS	RESULTANT SPEED (MPH)	6.5	3.1	3.2	1.6	1.6	1.3	3.2	3.1	3.8	3.1	5.1	4.0	2.2	
	RES. DIR. (TENS OF DEGS.)	25	30	31	31	09	14	21	21	17	23	25	28	25	
	MEAN SPEED (MPH)	13.4	12.1	11.8	13.3	12.1	9.9	9.5	7.8	10.3	11.0	13.7	12.0	11.4	
	PREVAIL.DIR.(TENS OF DEGS.)	30	30	30	31	01	17	18	19	16	30	16	30	30	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	47	32	30	40	48	43	31	24	32	33	35	33	48	
	DIR. (TENS OF DEGS.)	30	30	31	28	23	29	32	19	18	15	20	29	23	
	DATE OF OCCURRENCE	19	18	31	24	19	22	27	25	30	11	24	10	MAY 19	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	56	41	40	48	60	53	41	32	41	41	45	42	60	
DIR. (TENS OF DEGS.)	31	29	29	28	23	31	19	20	18	14	29	04	23		
DATE OF OCCURRENCE	19	11	18	24	19	22	13	25	30	11	17	20	MAY 19		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.78	1.22	2.85	6.79	12.26	6.86	2.14	1.80	1.22	2.98	1.76	1.10	41.76	
	GREATEST 24-HOUR (IN.)	0.34	0.36	0.87	1.84	2.43	2.76	0.57	0.75	0.82	0.77	1.03	0.19	2.76	
	DATE OF OCCURRENCE	27-28	22	09	09-10	17	21-22	13	10-11	14-15	15	05-06	24-25	JUN 21-22	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	10	14	11	17	20	15	9	7	5	10	10	14	142		
PRECIPITATION 0.10	3	3	9	12	13	13	6	4	3	1	4	6	77		
PRECIPITATION 1.00	0	0	0	2	6	3	0	0	0	0	0	0	11		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	1.9	15.4	23.5	4.2	14.5	0.0	0.0	0.0	0.0	T	1.3	13.1	73.9	
	GREATEST 24-HOUR (IN.)	1.1	6.2	6.8	1.2	14.0	0.0	0.0	0.0	0.0	T	0.5	3.4	14.0	
	DATE OF OCCURRENCE	30	22	10	12	02					23+	21+	24	MAY 02	
	MAXIMUM SNOW DEPTH (IN.)	5	9	15	1	13	0	0	0	0	0	1	7	15	
	DATE OF OCCURRENCE	04+	24+	19	12+	03						11	26	MAR 19	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	1	6	6	2	1	0	0	0	0	0	0	6	22		

NORMALS, MEANS, AND EXTREMES ROCHESTER (KRST)

LATITUDE: 43° 54'N **LONGITUDE:** 92° 29'W **ELEVATION (FT):** GRND: 1304 BARO: 1326 **TIME ZONE:** CENTRAL (UTC -6) **WBAN: 14925**

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	23.6	28.1	40.5	57.0	68.7	78.0	81.4	78.9	71.4	58.4	41.6	27.1	54.6
	MEAN DAILY MAXIMUM	98	21.7	25.7	38.8	54.8	68.0	75.8	81.8	79.7	70.5	58.7	41.0	27.1	53.6
	HIGHEST DAILY MAXIMUM	54	55	63	81	92	97	101	102	99	95	93	75	62	102
	YEAR OF OCCURRENCE		2012	1981	2012	2009	2013	2011	1988	1988	1978	1997	2012	2012	JUL 1988
	MEAN OF EXTREME MAXS.	99	40.4	43.7	60.8	78.5	86.4	91.0	92.1	90.2	86.4	78.8	62.8	45.3	71.4
	NORMAL DAILY MINIMUM	30	7.7	12.4	24.3	36.4	47.4	57.2	61.3	59.3	50.4	38.4	26.0	12.2	36.1
	MEAN DAILY MINIMUM	98	4.4	8.5	21.1	33.9	46.1	54.6	60.0	57.5	48.2	37.4	24.1	11.3	33.9
	LOWEST DAILY MINIMUM	54	-32	-35	-31	5	21	35	42	37	23	11	-20	-33	-35
	YEAR OF OCCURRENCE		1970	1996	1962	1982	1967	1990	1967	1964	1967	1988	1977	1983	FEB 1996
	MEAN OF EXTREME MINS.	99	-18.6	-13.6	-1.3	19.2	31.2	42.5	49.1	45.7	33.1	22.1	4.7	-11.7	16.9
	NORMAL DRY BULB	30	15.7	20.3	32.4	46.7	58.1	67.6	71.4	69.1	60.9	48.4	33.8	19.7	45.3
	MEAN DRY BULB	98	13.1	17.1	30.0	44.4	57.1	65.3	70.9	68.7	59.4	48.1	32.6	19.2	43.8
	MEAN WET BULB	30	13.3	17.0	27.8	38.6	49.4	59.3	64.0	62.4	53.7	41.5	29.0	17.4	39.5
	MEAN DEW POINT	30	11.8	15.3	25.7	35.6	47.0	57.3	62.6	61.1	52.1	39.4	27.6	16.1	37.6
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.4	1.5	2.5	1.4	0.1	0.1	0.0	0.0	6.0
	MAXIMUM <= 32	30	22.4	16.3	6.2	0.5	0.0	0.0	0.0	0.0	0.0	0.1	6.1	19.5	71.1
MINIMUM <= 32	30	30.5	26.3	23.4	8.6	0.7	0.0	0.0	0.0	0.5	8.1	21.3	29.5	148.9	
MINIMUM <= 0	30	9.4	6.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	6.5	23.9	
H/C	NORMAL HEATING DEG. DAYS	30	1530	1253	1011	553	245	52	11	27	177	521	936	1406	7722
	NORMAL COOLING DEG. DAYS	30	0	0	0	4	30	130	207	154	54	6	0	0	585
RH	NORMAL (PERCENT)	30	80	79	76	68	68	70	74	77	75	72	79	82	75
	HOURLY 00 LST	30	81	82	80	75	76	80	85	87	84	78	82	83	81
	HOURLY 06 LST	30	82	83	83	80	81	83	87	90	89	84	85	85	84
	HOURLY 12 LST	30	76	74	69	58	57	58	61	64	62	60	71	78	66
	HOURLY 18 LST	30	79	78	71	58	56	58	63	67	68	67	77	82	69
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	50	3.3	3.4	4.3	2.0	1.7	1.3	2.0	2.9	2.2	1.9	3.1	4.3	32.4
	THUNDERSTORMS	66	0.1	0.2	1.1	3.1	5.4	7.7	7.2	6.2	4.4	1.9	0.5	0.1	37.9
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	36	5.3	5.3	5.5	5.4	5.2	5.0	4.4	4.4	4.7	4.8	5.8	5.6	5.1
	MIDNIGHT-MIDNIGHT (OKTAS)	32	5.0	4.9	5.3	5.2	5.0	4.5	4.0	4.1	4.3	4.6	5.4	5.3	4.8
	MEAN NO. DAYS WITH: CLEAR	36	7.4	7.3	6.3	6.1	6.8	6.7	8.4	8.7	9.1	8.5	5.0	6.0	86.3
	PARTLY CLOUDY	36	7.1	6.2	7.1	7.4	8.8	10.7	11.9	11.1	7.3	7.8	5.6	6.3	97.3
	CLOUDY	36	16.5	14.8	17.6	16.4	15.4	12.7	10.7	11.2	13.6	14.7	19.4	18.7	181.7
PR	MEAN STATION PRESSURE(IN)	30	28.61	28.63	28.60	28.53	28.54	28.54	28.59	28.62	28.62	28.60	28.59	28.61	28.59
	MEAN SEA-LEVEL PRES. (IN)	30	30.09	30.10	30.05	29.96	29.95	29.93	29.97	30.01	30.02	30.02	30.04	30.08	30.02
WINDS	MEAN SPEED (MPH)	30	13.5	13.2	13.4	13.7	12.8	11.3	9.9	9.4	10.7	12.0	13.2	13.1	12.2
	PREVAIL.DIR(TENS OF DEGS)	40	32	31	32	32	17	19	19	19	19	19	31	32	32
	MAXIMUM 2-MINUTE: SPEED (MPH)	17	47	44	47	51	55	48	46	62	40	46	47	44	62
	DIR. (TENS OF DEGS)		30	32	29	23	32	31	30	34	32	25	29	31	34
	YEAR OF OCCURRENCE		2013	2002	1999	2001	2012	1999	2008	2006	2011	2010	1998	2004	AUG 2006
	MAXIMUM 3-SECOND SPEED (MPH)	17	56	54	58	62	69	59	62	74	56	58	56	58	74
	DIR. (TENS OF DEGS)		31	24	18	22	31	31	23	34	31	24	18	31	34
YEAR OF OCCURRENCE		2013	2009	2012	2001	2012	1999	2007	2007	2011	2010	1998	2004	AUG 2007	
PRECIPITATION	NORMAL (IN)	30	0.86	0.83	1.88	3.24	3.63	4.68	4.55	4.52	3.45	2.24	1.91	1.23	33.02
	MAXIMUM MONTHLY (IN)	54	2.53	2.21	3.58	7.30	12.26	12.51	12.33	14.07	10.50	7.57	5.90	3.68	14.07
	YEAR OF OCCURRENCE		1967	1971	1990	2001	2013	2000	1978	2007	1986	2009	1991	2010	AUG 2007
	MINIMUM MONTHLY (IN)	54	0.07	0.04	0.32	0.94	1.17	0.94	1.02	0.34	0.38	0.27	0.06	0.22	0.04
	YEAR OF OCCURRENCE		1961	1964	1994	2000	1963	1985	1975	2003	1975	1965	1967	1967	FEB 1964
	MAXIMUM IN 24 HOURS (IN)	54	1.42	1.31	2.20	3.97	5.23	4.80	7.47	6.24	6.01	2.81	2.64	7.55	7.55
	YEAR OF OCCURRENCE		1967	2012	2011	1990	2000	2000	1981	2007	1978	1966	1991	2012	DEC 2012
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	8.4	7.9	10.2	11.2	12.4	11.7	10.5	10.0	9.9	9.4	9.3	9.7	120.6
PRECIPITATION >= 1.00	30	0.0	0.0	0.2	0.6	0.8	1.2	1.2	1.2	0.9	0.4	0.3	0.1	6.9	
SNOWFALL	NORMAL (IN)	30	12.0	8.5	8.7	3.3	0.0	0.0	0.0	0.0	0.0	0.8	6.1	12.5	51.9
	MAXIMUM MONTHLY (IN)	50	30.2	20.1	25.2	16.4	14.5	T	T	T	0.8	7.9	22.5	41.3	41.3
	YEAR OF OCCURRENCE		1996	2007	1985	1983	2013	1993	2009	2007	1961	2009	1985	2010	DEC 2010
	MAXIMUM IN 24 HOURS (IN)	50	15.4	9.3	19.8	13.7	14.0	T	T	T	0.8	5.4	9.2	15.0	19.8
	YEAR OF OCCURRENCE		1982	1983	2005	1988	2013	1993	2009	1989	1961	1979	1991	2010	MAR 2005
	MAXIMUM SNOW DEPTH (IN)	61	29	21	20	11	13	0	0	0	0	4	11	29	29
	YEAR OF OCCURRENCE		1982	2010	2007	1988	2013					1979	2006	2010	DEC 2010
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	3.6	2.7	2.5	0.8	0.0	0.0	0.0	0.0	0.0	0.2	1.8	3.6	15.2	

PRECIPITATION (inches) 2013 ROCHESTER (KRST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	0.11	1.96	1.08	3.91	2.89	3.74	3.34	1.93	2.40	3.78	1.68	1.79	28.61
1985	0.63	0.57	2.31	1.58	1.74	0.94	2.57	5.40	6.41	1.53	2.43	1.14	27.25
1986	0.59	0.61	2.15	3.80	3.40	5.04	6.00	3.17	10.50	3.57	0.84	0.32	39.99
1987	0.58	0.23	1.29	1.02	2.12	3.69	7.24	3.85	2.05	1.61	1.94	1.75	27.37
1988	1.16	0.22	1.56	2.43	2.35	1.52	1.12	2.88	3.77	0.40	2.87	1.11	21.39
1989	0.41	0.42	1.65	3.49	1.74	2.39	3.31	5.73	0.61	1.67	1.62	0.38	23.42
1990	0.55	0.71	3.58	6.47	4.52	9.27	8.29	5.30	1.30	1.86	0.44	1.65	43.94
1991	0.67	0.45	2.82	5.25	3.84	2.25	5.32	4.66	2.31	1.99	5.90	1.47	36.93
1992	1.03	0.55	2.53	3.24	1.60	1.59	3.51	1.50	4.93	1.30	4.02	1.30	27.10
1993	1.15	0.83	2.92	4.56	4.32	7.44	5.00	6.88	2.75	0.85	1.00	0.74	38.44
1994	1.21	0.72	0.32	4.95	3.22	2.89	4.79	5.64	3.62	1.59	1.77	0.54	31.26
1995	0.45	0.15	2.98	2.91	3.18	3.30	3.56	3.23	2.34	3.07	0.68	0.62	26.47
1996	2.00	0.18	2.64	1.53	2.13	6.43	1.93	2.94	2.08	2.86	3.94	1.37	30.03
1997	1.63	0.92	1.63	2.32	3.05	2.59	9.00	3.23	1.85	2.71	0.26	0.38	29.57
1998	1.47	1.44	3.27	2.20	3.38	5.51	3.30	4.46	1.04	4.71	1.15	0.28	32.21
1999	2.07	1.13	0.81	6.47	5.32	3.76	8.74	6.20	0.56	0.92	1.00	0.49	37.47
2000	0.41	0.45	0.64	0.94	7.38	12.51	5.57	5.26	1.03	1.65	3.06	1.64	40.54
2001	0.91	1.06	1.39	7.30	7.18	5.05	2.46	4.77	3.82	1.71	2.06	1.39	39.10
2002	0.65	1.68	1.24	3.40	1.47	8.20	5.00	4.64	2.02	3.50	0.12	0.56	32.48
2003	0.31	0.65	2.28	2.54	4.65	4.74	3.39	0.34	1.58	0.52	0.99	1.35	23.34
2004	0.32	1.58	2.21	2.34	6.38	8.53	4.59	3.44	5.80	2.11	1.49	0.59	39.38
2005	1.16	1.19	1.98	1.77	3.54	3.72	5.13	4.04	7.13	0.88	2.26	0.59	33.39
2006	0.30	0.40	2.54	5.51	1.86	3.45	2.90	6.25	3.34	0.79	2.84	2.04	32.22
2007	0.53	1.65	3.21	1.11	3.35	4.00	1.07	14.07	7.40	3.40	0.18	1.21	41.18
2008	0.67	0.56	1.58	4.17	3.47	7.15	3.21	1.92	1.75	2.45	2.34	1.52	30.79
2009	0.64	0.79	0.88	2.09	3.77	3.33	3.51	4.16	1.28	7.57	0.45	2.22	30.69
2010	0.58	0.79	1.05	1.62	2.04	7.79	4.98	3.72	9.95	0.79	2.86	3.68	39.85
2011	0.84	0.77	3.51	4.03	3.92	5.20	4.18	0.96	2.47	0.29	0.38	1.21	27.76
2012	0.57	1.63	1.24	2.66	4.85	3.25	3.25	1.96	1.29	1.85	0.51	1.78	24.84
2013	0.78	1.22	2.85	6.79	12.26	6.86	2.14	1.80	1.22	2.98	1.76	1.10	41.76
POR= 95 YRS	0.85	0.79	1.70	2.74	3.75	4.49	3.86	3.81	3.16	2.06	1.61	1.01	29.83

WBAN : 14925

AVERAGE TEMPERATURE (°F) 2013 ROCHESTER (KRST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	12.4	25.4	23.4	44.8	52.5	65.9	67.7	70.6	56.2	49.6	33.1	19.1	43.4
1985	10.3	14.8	35.9	50.4	60.4	62.6	70.5	65.3	58.7	46.0	23.0	6.3	42.0
1986	15.9	15.3	32.7	48.4	57.5	65.9	71.4	64.0	59.5	47.5	26.3	22.5	43.9
1987	19.2	29.3	36.2	50.8	61.0	70.0	73.7	66.8	60.0	42.3	36.8	23.3	47.5
1988	8.3	12.3	31.9	44.0	61.7	70.4	73.7	72.6	61.0	42.0	32.5	19.2	44.1
1989	21.7	9.4	26.3	44.1	55.8	64.4	72.3	68.5	58.2	48.7	27.1	10.0	42.2
1990	25.8	22.1	35.3	45.5	53.8	67.6	69.4	69.4	62.4	46.5	37.7	15.4	45.9
1991	10.1	23.5	34.1	48.3	61.0	72.2	70.1	69.0	57.4	45.5	24.0	21.6	44.7
1992	21.4	26.7	31.3	42.1	58.2	64.6	64.2	63.2	57.7	46.0	30.8	19.8	43.8
1993	12.6	14.6	25.7	41.7	55.7	63.6	69.0	68.3	53.6	45.5	30.3	21.5	41.8
1994	3.4	11.0	33.1	44.5	58.3	68.6	67.3	64.9	63.2	50.4	36.4	24.0	43.8
1995	16.3	18.9	33.4	40.3	55.1	69.2	70.9	73.3	57.8	46.7	25.7	18.1	43.8
1996	9.6	17.0	25.1	40.8	53.4	66.4	66.8	66.5	58.7	47.8	24.6	13.8	40.9
1997	10.5	18.9	28.3	41.7	51.3	67.7	68.9	65.5	60.4	49.7	27.6	25.0	43.0
1998	19.7	29.5	30.0	49.1	63.2	63.9	69.6	69.1	64.4	49.6	36.3	25.1	47.5
1999	11.2	26.6	32.8	46.7	58.1	65.7	73.2	66.7	58.1	47.0	40.1	23.6	45.8
2000	14.4	26.3	39.3	45.6	58.9	64.5	69.4	69.0	59.9	51.7	30.0	6.1	44.6
2001	17.4	11.2	24.0	47.7	57.6	66.4	72.5	68.9	58.0	46.6	45.4	26.4	45.2
2002	24.3	26.0	25.5	44.6	53.9	68.8	73.0	67.2	62.6	41.9	31.3	24.4	45.3
2003	13.6	14.9	30.9	45.5	55.3	65.4	69.6	70.8	59.6	48.6	32.0	24.4	44.2
2004	12.4	20.1	36.0	48.5	56.7	64.2	68.2	63.5	64.4	48.6	36.3	21.6	45.0
2005	14.3	24.6	29.7	50.0	55.0	71.9	72.4	67.7	64.8	51.6	35.9	17.2	46.3
2006	28.2	19.6	32.8	51.3	59.4	68.3	74.3	69.6	57.8	44.7	36.6	29.0	47.6
2007	18.3	10.5	35.8	44.7	62.6	69.3	71.8	69.8	63.9	54.5	33.7	17.1	46.0
2008	13.7	13.3	28.5	44.1	56.2	68.1	71.2	68.5	62.6	49.6	34.6	12.5	43.6
2009	8.6	20.7	32.8	46.2	58.0	65.9	65.3	65.7	62.6	42.6	42.8	16.7	44.0
2010	11.0	15.8	38.3	53.0	59.2	67.1	72.7	72.8	59.6	52.6	35.2	14.8	46.0
2011	11.5	18.0	29.9	45.4	57.8	68.0	75.1	69.2	59.3	53.0	38.5	26.1	46.0
2012	22.8	27.7	49.2	49.1	63.3	71.0	77.1	69.2	61.8	48.8	38.4	24.0	50.2
2013	17.5	19.4	23.8	40.2	55.7	67.0	71.4	69.9	64.0	47.7	31.1	13.1	43.4
POR= 98 YRS	13.1	17.1	30.0	44.4	57.1	65.3	70.9	68.7	59.4	48.1	32.6	19.2	43.8

HEATING DEGREE DAYS (base 65°F) 2013 ROCHESTER (KRST)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	23	18	281	470	950	1414	1692	1404	895	456	166	129	7898
1985-86	6	55	268	580	1255	1817	1516	1388	994	492	248	60	8679
1986-87	5	81	187	535	1153	1312	1412	993	888	425	173	31	7195
1987-88	8	64	168	697	837	1290	1755	1527	1020	620	144	22	8152
1988-89	3	27	154	706	970	1414	1335	1555	1190	620	290	99	8363
1989-90	0	16	224	500	1132	1700	1205	1196	912	596	341	55	7877
1990-91	9	14	167	567	815	1534	1701	1154	950	507	222	12	7652
1991-92	15	24	274	597	1225	1342	1343	1104	1036	678	239	80	7957
1992-93	73	104	226	587	1019	1394	1618	1407	1211	693	294	87	8713
1993-94	7	32	341	605	1033	1344	1910	1509	985	613	234	34	8647
1994-95	26	73	116	445	848	1264	1503	1284	974	732	300	56	7621
1995-96	14	0	242	569	1175	1447	1715	1386	1232	721	377	71	8949
1996-97	22	18	215	528	1206	1579	1682	1286	1132	689	416	21	8794
1997-98	38	51	151	498	1117	1236	1398	990	1075	470	116	111	7251
1998-99	3	1	99	473	854	1232	1662	1069	990	543	222	81	7229
1999-00	5	20	239	551	738	1276	1558	1114	793	574	224	84	7176
2000-01	26	11	193	407	1040	1820	1470	1499	1262	517	248	94	8587
2001-02	13	31	222	563	582	1190	1254	1087	1217	618	363	44	7184
2002-03	1	22	145	710	1003	1255	1585	1396	1051	587	295	62	8112
2003-04	10	9	217	508	982	1254	1626	1295	892	495	259	86	7633
2004-05	17	100	92	502	857	1337	1563	1122	1091	442	307	1	7431
2005-06	7	23	92	446	868	1473	1135	1264	991	402	246	32	6979
2006-07	0	0	229	636	846	1108	1439	1518	900	606	134	14	7430
2007-08	3	14	112	360	930	1479	1589	1493	1125	621	275	11	8012
2008-09	1	11	116	475	904	1619	1743	1233	992	562	235	86	7977
2009-10	40	54	97	688	658	1491	1666	1370	819	355	244	22	7504
2010-11	0	8	167	387	889	1550	1656	1307	1082	582	248	50	7926
2011-12	0	5	210	388	786	1198	1302	1074	502	470	114	17	6066
2012-13	0	24	146	495	789	1264	1465	1268	1266	736	312	60	7825
2013-	23	11	120	529	1010	1601							

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COOLING DEGREE DAYS (base 65°F) 2013 ROCHESTER (KRST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1984	0	0	0	0	1	74	115	201	23	0	0	0	414
1985	0	0	0	26	28	64	182	74	86	0	0	0	460
1986	0	0	0	2	21	94	211	59	29	0	0	0	416
1987	0	0	0	6	57	189	283	124	26	0	0	0	685
1988	0	0	0	0	48	191	280	272	38	0	0	0	829
1989	0	0	0	0	10	90	235	133	26	2	0	0	496
1990	0	0	0	18	3	140	153	158	97	0	0	0	569
1991	0	0	0	11	101	233	181	153	52	0	0	0	731
1992	0	0	0	0	34	75	54	52	16	2	0	0	233
1993	0	0	0	0	10	52	136	137	6	4	0	0	345
1994	0	0	0	6	33	150	104	77	69	0	0	0	439
1995	0	0	0	0	0	188	205	263	36	7	0	0	699
1996	0	0	0	0	22	120	87	73	37	0	0	0	339
1997	0	0	0	0	0	110	165	73	20	31	0	0	399
1998	0	0	0	0	67	86	152	133	89	0	0	0	527
1999	0	0	0	0	15	109	264	79	37	0	0	0	504
2000	0	0	0	0	40	77	167	142	47	4	0	0	477
2001	0	0	0	3	26	139	250	160	17	0	0	0	595
2002	0	0	0	12	27	165	257	97	78	0	0	0	636
2003	0	0	0	10	1	82	156	194	62	7	0	0	512
2004	0	0	0	7	9	67	125	60	81	1	0	0	350
2005	0	0	0	2	4	215	242	114	89	36	0	0	702
2006	0	0	0	0	77	137	297	151	22	14	0	0	698
2007	0	0	0	7	65	152	220	171	86	38	0	0	739
2008	0	0	0	0	8	112	201	126	50	6	0	0	503
2009	0	0	0	4	24	118	57	83	33	0	0	0	319
2010	0	0	0	3	69	91	245	254	10	11	0	0	683
2011	0	0	0	0	30	144	320	141	45	26	0	0	706
2012	0	0	18	0	68	203	381	160	58	0	0	0	888
2013	0	0	0	0	30	126	229	171	100	0	0	0	656

SNOWFALL (inches) 2013 ROCHESTER (KRST)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	0.0	0.0	0.0	T	3.7	14.4	12.2	9.3	25.2	3.8	0.0	0.0	68.6
1985-86	0.0	0.0	T	0.0	22.5	16.0	11.5	8.7	1.2	0.8	0.0	0.0	60.7
1986-87	0.0	0.0	0.0	T	8.4	3.5	8.1	2.3	4.7	T	0.0	0.0	27.0
1987-88	0.0	0.0	0.0	0.9	1.7	16.0	18.2	5.8	3.1	15.6	0.0	0.0	61.3
1988-89	0.0	0.0	0.0	T	10.8	4.8	4.7	9.3	21.2	0.1	0.2	0.0	51.1
1989-90	0.0	T	0.0	2.6	10.5	6.6	5.9	9.3	0.5	0.2	0.0	T	35.6
1990-91	0.0	0.0	0.0	0.8	1.6	20.8	9.9	6.1	5.9	0.8	0.0	0.0	45.9
1991-92	0.0	0.0	0.0	4.5	20.3	7.3	9.0	6.5	15.0	T	T	0.0	62.6
1992-93	0.0	0.0	0.0	0.8	4.3	11.7	15.7	10.8	9.8	9.3	0.0	T	62.4
1993-94	T	0.0	0.0	T	7.7	6.0	21.8	15.3	2.9	3.2	T	0.0	56.9
1994-95	T	0.0	0.0	0.0	4.8	7.2	4.5	1.4	10.1	5.1	T	0.0	33.1
1995-96	0.0	0.0	T	2.3	4.0	11.8	30.2	1.9	9.3	2.1	0.0	0.0	61.6
1996-97	0.0	0.0	0.0	T	17.5	19.6	14.4	11.8	18.8	2.9	0.1	0.0	85.1
1997-98	0.0	0.0	0.0	T	3.9	4.3	17.1	7.0	10.1	T	0.0	0.0	42.4
1998-99	0.0	0.0	0.0	0.0	2.0	5.3	29.4	5.4	6.7	T	0.0	0.0	48.8
1999-00	0.0	0.0	0.0	0.5	T	7.6	19.3	7.0	3.3	2.1	T	0.0	39.8
2000-01	0.0	0.0	0.0	T	5.4	35.3	7.3	7.4	10.2	T	0.0	T	65.6
2001-02	0.0	0.0	0.0	T	0.4	2.2	10.0	5.5	7.1	6.9	T	0.0	32.1
2002-03	T	0.0	0.0	1.4	1.0	1.6	5.7	6.4	6.0	6.4	0.0	0.0	28.5
2003-04	0.0	0.0	0.0	T	1.3	12.3	9.1	16.6	3.7	0.0	0.0	T	43.0
2004-05	0.0	0.0	0.0	0.0	2.8	4.1	13.9	9.1	23.0	0.1	T	0.0	53.0
2005-06	0.0	0.0	0.0	0.0	5.5	12.1	0.8	8.2	11.1	0.0	0.0	0.0	37.7
2006-07	0.0	0.0	0.0	0.1	10.6	0.8	10.5	20.1	12.3	7.4	0.0	0.0	61.8
2007-08	0.0	T	0.0	0.0	0.9	13.1	13.0	7.3	9.0	0.8	T	0.0	44.1
2008-09	0.0	0.0	0.0	0.1	4.4	28.6	9.8	8.0	1.2	0.6	0.0	0.0	52.7
2009-10	T	0.0	0.0	7.9	0.2	26.3	4.2	13.9	0.0	0.0	T	0.0	52.5
2010-11	0.0	0.0	0.0	0.0	1.3	41.3	9.8	9.3	4.6	4.2	T	0.0	70.5
2011-12	0.0	0.0	0.0	T	0.2	8.4	8.1	3.9	T	T	0.0	0.0	20.6
2012-13	0.0	0.0	0.0	T	0.1	14.4	1.9	15.4	23.5	4.2	14.5	0.0	74.0
2013-	0.0	0.0	0.0	T	1.3	13.1							
POR= 80 YRS	T	T	T	0.7	4.9	9.6	9.3	7.6	9.0	2.8	0.2	T	44.1

WBAN : 14925

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. 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 CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.</p> <p>GENERAL CONTINUED: 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</p>	<p>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. 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. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED STATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS: http://www.ncdc.noaa.gov/homr/ SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p>NOTE: The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2013 ROCHESTER MINNESOTA (KRST)

Rochester, Minnesota, is in the Zumbro River Valley. The south branch of the Zumbro flows through Rochester. Within the city of Rochester three creeks flow into the south branch. Terrain around Rochester is rolling, and the elevation ranges from 1,000 to 1,300 feet above sea level.

The National Weather Service station is located 8 miles south of Rochester on a ridge 300 feet above the city elevation. Temperatures from radiation cooling on clear, calm nights can sometimes be much lower in the city.

The succession of high and low pressure systems over Rochester brings a variety of weather that is changeable and stimulating. The weather pattern is continental with four definite seasons. Winters are cold, but summers are pleasant.

The season-to-season temperature variation is quite large. The average temperature for a warm winter is 20 degrees and for a cold winter it is 12 degrees. The average temperature for a warm summer is 70 degrees and a cold summer is 67 degrees, which indicates that summer temperatures are not as variable as those during the winter. The average growing season is about 140 days.

Rochester lies near the northern edge of the influx of moisture from the Gulf of Mexico. Severe storms such as blizzards, freezing rain (glaze), tornadoes, wind, and hail storms do occur. During the five month growing season, May through September, the major crops of corn, soybeans, small grains, and hay are produced. During this period, the normal rainfall is over 18 inches, approximately 65 percent of the annual precipitation.

Snowfall averages above 45 inches per season. The snow season usually begins in November. About one year in ten the first 1 inch or more of snow will occur the latter part of October.

Rolling terrain and the thunderstorm probability make the south branch of the Zumbro River and its tributaries susceptible to flash flooding. Some flooding can occur with the spring snowmelt. In some instances the snowmelt is complicated with moderate spring rainfall.

Station History

ROCHESTER, MN

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
ROCHESTER INTL AP	2005-04-26	Present	43° 54'	-92° 29'	1304		ASOS, COOP, WXSVC
ROCHESTER MUNICIPAL AP	1961-01-01	1973-01-01	43° 55'	-92° 30'	1297		AIRWAYS, COOP
ROCHESTER	1940-01-01	1948-01-01	44° 00'	-92° 27'	1017		AIRWAYS
ROCHESTER MUNICIPAL AP	1960-09-25	1961-01-01	43° 55'	-92° 30'	1297		COOP
ROCHESTER MUNICIPAL AP	1973-01-01	1996-06-01	43° 55'	-92° 30'	1297		COOP, WXSVC
ROCHESTER INTL AP	2002-09-19	2005-04-26	43° 54'	-92° 29'	1326		ASOS, COOP, WXSVC
ROCHESTER	1948-01-01	1960-09-25	44° 00'	-92° 27'	1017		AIRWAYS, COOP
ROCHESTER INTL AP	1996-06-01	1996-08-01	43° 54'	-92° 29'	1326		ASOS, COOP, WXSVC
ROCHESTER INTL AP	1996-08-01	2002-09-19	43° 54'	-92° 29'	1326	1 MI S	ASOS, COOP, WXSVC

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMPATOBS	1960-09-25	1989-08-30	TWICE DAILY - AM/PM	UNKN	FRONTIER		
TEMP	2002-09-19	2005-04-26	DAILY	2400	ATEMP		
PRECIP	1996-06-01	2002-09-19	DAILY	2400	TB	RCRD	
TEMP	1992-06-01	1995-07-01	DAILY	2400	MXMN		
TEMP	1995-07-01	1996-06-01	DAILY	2400	MXMN		
TEMPATOBS	1996-06-01	2002-09-19	TWICE DAILY - AM/PM	UNKN	FRONTIER		
PRECIP	2002-09-19	2005-04-26	HOURLY	2400	AHTB	RCRD;HTD	
PRECIP	2005-04-26	2010-09-15	DAILY	2400	PCPNX		
PRECIP	2010-09-15	Present	HOURLY	2400	AWPAG	SHLD;RCRD;HTD	
TEMP	1960-09-25	1992-06-01	DAILY	2400			
TEMPATOBS	1992-06-01	1995-07-01	TWICE DAILY - AM/PM	UNKN	FRONTIER		
PRECIP	1995-07-01	1996-06-01	DAILY	2400	UNIV	RCRD	
TEMP	1996-06-01	2002-09-19	DAILY	2400	ATEMP		
TEMP	2010-09-15	Present	DAILY	2400	ATEMP		
PRECIP	1960-09-25	1992-06-01	HOURLY	2400			
PRECIP	1995-07-01	1996-06-01	HOURLY	2400		RCRD	
PRECIP	2002-09-19	2005-04-26	DAILY	2400	PCPNX		
PRECIP	1960-09-25	1992-06-01	DAILY	2400	UNIV	RCRD	
TEMP	2005-04-26	2010-09-15	DAILY	2400	ATEMP		
PRECIP	1992-06-01	1995-07-01	HOURLY	2400			
PRECIP	1992-06-01	1995-07-01	DAILY	2400	UNIV	RCRD	
TEMPATOBS	1995-07-01	1996-06-01	TWICE DAILY - AM/PM	UNKN	FRONTIER		
PRECIP	1996-06-01	2002-09-19	HOURLY	2400	TB	RCRD	
PRECIP	2005-04-26	2010-09-15	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	2010-09-15	Present	DAILY	2400	PCPNX	SHLD	

* For explanation of codes and abbreviations see Station Metadata link below.

Other Station Information can be found at:

ASOS Implementation by NWS: <http://www.nws.noaa.gov/ops2/Surface/asosimplementation.htm>

Station Metadata website: <http://www.ncdc.noaa.gov/homr>

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2

Fax Number : (828) 271-4876

TDD : (828) 271-4010

Email : ncdc.orders@noaa.gov

NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

Visit our Web Site for other weather data: www.ncdc.noaa.gov