

1999

LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA



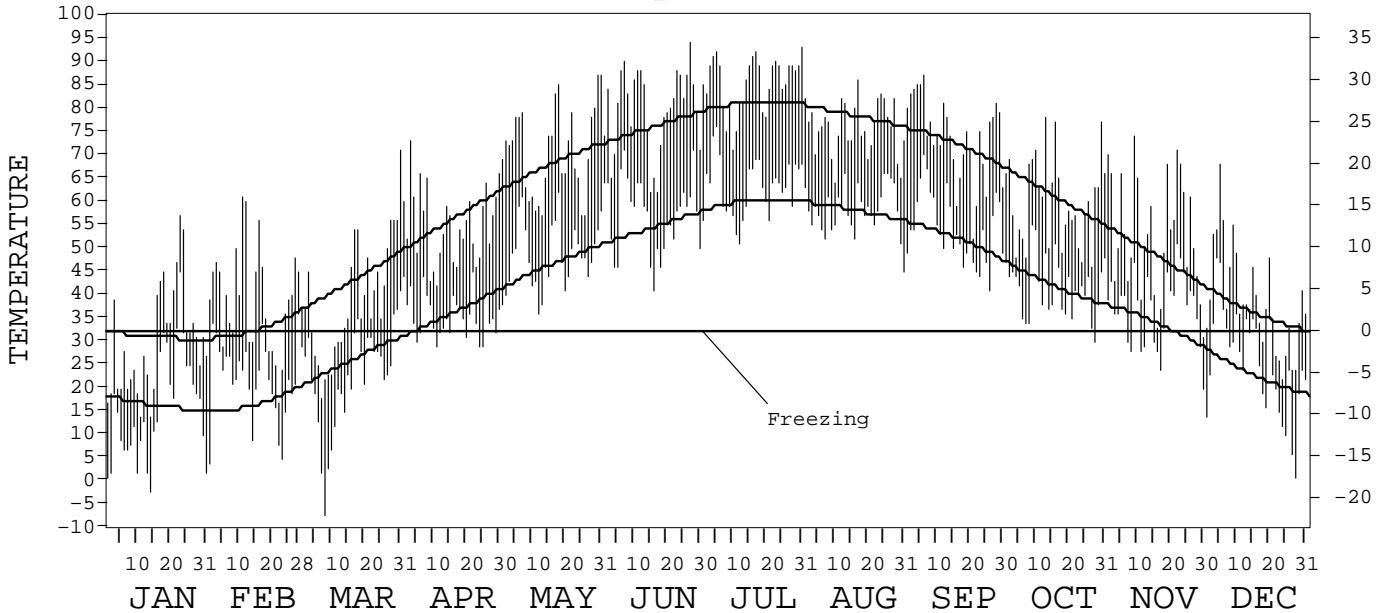
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ROCHESTER,  
NEW YORK (ROC)

Daily Data

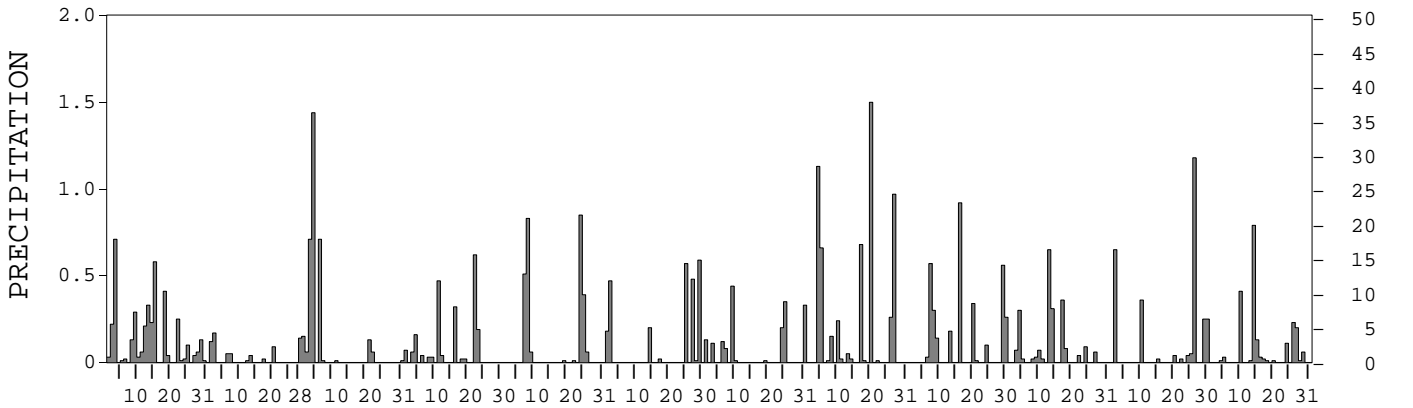
Fahrenheit

Celsius



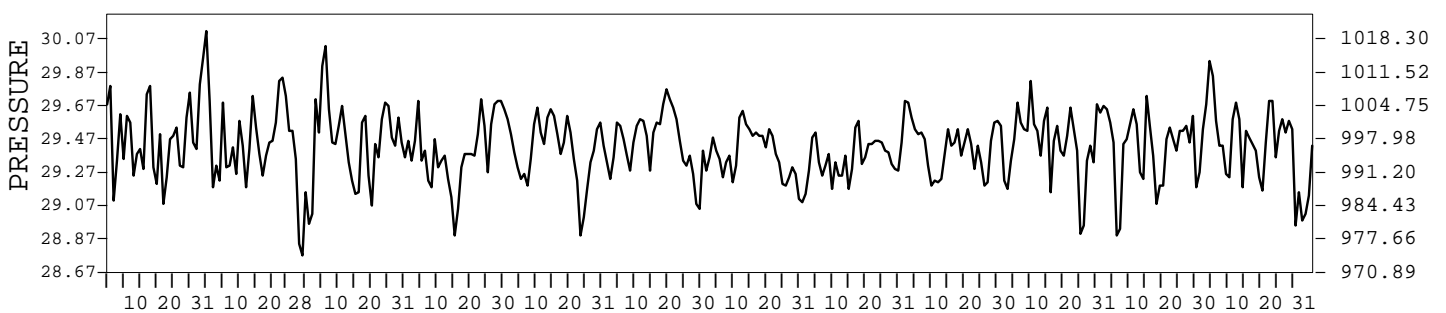
Inches

Millimeters



Inches of Mercury

Hectopascals



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE  
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 ASHEVILLE, NORTH CAROLINA

# METEOROLOGICAL DATA FOR 1999

## ROCHESTER, NY (ROC)

LATITUDE: 43° 07' 00" N      LONGITUDE: 77° 40' 36" W      ELEVATION (FT): GRND: 587      BARO: 587      TIME ZONE: EASTERN (UTC + 5)      WBAN: 14768

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	30.1	39.1	39.0	55.0	70.7	79.5	85.4	75.9	73.6	60.1	52.9	38.8	58.3	
	HIGHEST DAILY MAXIMUM	57	61	71	73	87	94	93	86	87	78	74	68	94	
	DATE OF OCCURRENCE	23	11	31	03	31+	27	31	17	06	13	09	05	JUN 27	
	MEAN DAILY MINIMUM	15.7	22.0	22.6	35.6	48.4	57.1	63.1	58.2	54.3	41.6	36.9	25.5	40.1	
	LOWEST DAILY MINIMUM	-2	4	-7	29	36	41	51	45	41	30	20	1	-7	
	DATE OF OCCURRENCE	14	01	08	25+	12	16	12	31	26	28	30	28	MAR 08	
	AVERAGE DRY BULB	22.9	30.6	30.8	45.3	59.6	68.3	74.3	67.1	64.0	50.9	44.9	32.2	49.2	
	MEAN WET BULB	21.4	27.6	27.3	39.6	54.2	61.9	66.7	61.8	59.1	46.5	40.8	29.9	44.7	
	MEAN DEW POINT	16.9	20.7	20.4	31.3	49.2	57.0	62.0	58.3	55.5	41.8	34.8	25.4	39.4	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	2	6	0	0	0	0	0	0	8
	MAXIMUM ≤ 32°	20	9	10	0	0	0	0	0	0	0	1	7	47	
	MINIMUM ≤ 32°	29	25	27	9	0	0	0	0	0	1	9	21	121	
MINIMUM ≤ 0°	1	0	1	0	0	0	0	0	0	0	0	0	2		
H/C	HEATING DEGREE DAYS	1295	955	1054	583	194	57	2	25	100	431	595	1008	6299	
	COOLING DEGREE DAYS	0	0	0	0	38	161	296	93	77	0	0	0	665	
RH	MEAN (PERCENT)	78	68	67	61	70	69	68	76	77	73	69	75	71	
	HOUR 01 LST	78	73	74	69	84	83	83	87	88	82	72	79	79	
	HOUR 07 LST	81	76	77	72	81	79	80	87	88	84	75	78	80	
	HOUR 13 LST	71	57	58	50	54	55	49	61	58	58	61	69	58	
	HOUR 19 LST	77	65	61	53	60	58	57	67	73	74	69	76	66	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	0	0	1	0	0	1	2	1	0	1	1	7	
	THUNDERSTORMS	0	0	0	1	1	3	6	5	0	1	1	1	18	
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.)	29.50	29.44	29.43	29.39	29.41	29.45	29.36	29.39	29.40	29.48	29.42	29.41	29.42	
	MEAN SEA-LEVEL PRESS. (IN.)	30.12	30.06	30.05	29.99	30.01	30.04	29.95	29.98	29.99	30.08		30.06		
WINDS	RESULTANT SPEED (MPH)	4.8	3.3	5.4	2.6	2.5	3.6	2.1	1.7	3.1	4.7	6.7	6.1	3.5	
	RES. DIR. (TENS OF DEGS.)	23	25	28	33	24	23	21	26	22	24	25	23	25	
	MEAN SPEED (MPH)	11.9	9.8	11.0	10.6	8.3	7.8	8.7	7.1	7.3	9.0	11.5	10.1	9.4	
	PREVAIL. DIR. (TENS OF DEGS.)	24	25	25	03	22	20	24	22	20	20	25	25	24	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	34	32	37	40	30	29	52	36	32	32	41	32	52	
	DIR. (TENS OF DEGS.)	25	25	27	22	21	30	20	30	26	26	17	23	20	
	DATE OF OCCURRENCE	19	12+	04	06	25	14	31	04	23	13	02	30+	JUL 31	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	43	41	52	52	40	38	63	53	39	45	52	41	63	
DIR. (TENS OF DEGS.)	22	24	24	23	22	22	20	31	26	26	17	25	20		
DATE OF OCCURRENCE	24	12	18	06	25	02	31	04	23	13	02	30+	JUL 31		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.92	0.69	3.28	2.07	2.72	2.52	1.78	5.71	3.41	2.12	2.86	2.06	33.14	
	GREATEST 24-HOUR (IN.)	0.85	0.29	1.96	0.80	1.33	0.59	0.47	1.74	0.92	0.96	1.23	0.82	1.96	
	DATE OF OCCURRENCE	02-03	01-02	03-04	22-23	07-08	29	24-25	04-05	16	13-14	25-26	14-15	MAR 03-04	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	23	9	9	13	8	8	10	14	11	14	10	15	144	
PRECIPITATION ≥ 0.10	12	3	5	5	4	6	7	8	9	4	5	6	74		
PRECIPITATION ≥ 1.00	0	0	1	0	0	0	0	2	0	0	1	0	4		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	48.8	4.7	45.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	4.7	19.1	125.2	
	GREATEST 24-HOUR (IN.)	9.6	2.5	23.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.4	8.0	23.3	
	DATE OF OCCURRENCE	13	20	03-04	11							29	26-27	MAR 03-04	
	MAXIMUM SNOW DEPTH (IN.)	28	2	34	0	0	0	0	0	0	0	3	6	34	
	DATE OF OCCURRENCE	15	01	07								30	29+	MAR 07	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	12	1	3	1	0	0	0	0	0	0	2	5	24		

# NORMALS, MEANS, AND EXTREMES

## ROCHESTER, NY (ROC)

LATITUDE: 43° 07' 00" N      LONGITUDE: 77° 40' 36" W      ELEVATION (FT): GRND: 587      BARO: 587      TIME ZONE: EASTERN (UTC + 5)      WBAN: 14768

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	30.9	32.5	42.7	55.9	67.8	75.8	80.7	78.1	71.8	60.5	47.8	35.8	56.7
	MEAN DAILY MAXIMUM	52	31.4	33.1	41.7	55.8	67.8	77.6	82.0	79.8	72.0	61.2	47.8	36.2	57.2
	HIGHEST DAILY MAXIMUM	59	74	73	84	93	94	100	98	99	99	91	81	72	100
	YEAR OF OCCURRENCE		1950	1997	1945	1990	1987	1953	1993	1948	1953	1951	1950	1982	JUN 1953
	MEAN OF EXTREME MAXS.	52	53.3	53.6	68.6	78.7	85.9	91.1	92.8	90.8	87.9	80.2	69.1	56.9	75.7
	NORMAL DAILY MINIMUM	30	16.3	16.6	25.7	35.9	46.3	54.3	59.6	57.8	51.7	41.6	33.3	22.4	38.5
	MEAN DAILY MINIMUM	52	17.1	17.5	25.2	36.1	46.1	55.6	60.5	58.8	51.5	41.6	33.0	23.0	38.8
	LOWEST DAILY MINIMUM	59	-1.7	-1.9	-7	13	26	35	42	36	28	20	5	-16	-19
	YEAR OF OCCURRENCE		1994	1979	1999	1982	1979	1949	1963	1965	1947	1972	1971	1942	FEB 1979
	MEAN OF EXTREME MINS.	52	-2.3	-1.6	6.3	22.2	32.6	41.8	48.6	46.4	37.2	28.0	18.1	3.0	23.4
	NORMAL DRY BULB	30	23.6	24.6	34.3	45.9	57.1	65.1	70.2	68.0	61.7	51.1	40.5	29.1	47.6
	MEAN DRY BULB	52	24.2	25.3	33.4	46.0	57.1	66.6	71.3	69.3	61.8	51.4	40.4	29.5	48.0
	MEAN WET BULB	15	23.6	24.0	30.4	41.0	51.3	60.0	64.6	63.2	56.7	46.2	36.6	28.0	43.8
	MEAN DEW POINT	15	18.7	18.7	24.2	34.4	45.5	55.3	60.6	59.7	53.2	41.7	31.8	23.3	38.9
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.1	0.4	1.6	4.3	2.0	0.7	0.0	0.0	0.0	9.1	
MAXIMUM ≤ 32°	30	17.0	14.5	6.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	11.5	51.0	
MINIMUM ≤ 32°	30	28.9	25.4	23.0	11.1	1.2	0.0	0.0	0.0	0.1	4.1	15.1	26.0	134.9	
MINIMUM ≤ 0°	30	3.0	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.4	
H/C	NORMAL HEATING DEG. DAYS	30	1283	1131	952	573	270	62	10	33	137	435	735	1113	6734
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	25	65	171	126	38	0	0	0	425
RH	NORMAL (PERCENT)	30	74	74	71	67	67	69	70	74	77	74	76	78	73
	HOUR 01 LST	30	76	78	76	76	78	82	83	87	87	82	80	79	80
	HOUR 07 LST	30	77	79	78	77	77	80	82	87	88	84	82	81	81
	HOUR 13 LST	30	69	68	62	55	54	55	54	58	60	60	67	72	61
	HOUR 19 LST	30	74	73	69	62	60	60	60	67	74	74	76	78	69
S	PERCENT POSSIBLE SUNSHINE	57	35	41	49	53	59	66	69	66	59	49	31	31	51
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	59	0.9	0.6	1.5	1.0	1.1	1.1	0.6	0.8	1.3	1.7	0.8	1.0	12.4
	THUNDERSTORMS	59	0.1	0.1	0.9	2.0	3.6	5.1	6.2	5.7	3.1	0.9	0.4	0.2	28.3
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	56	6.6	6.3	5.8	5.4	5.3	4.9	4.6	4.7	4.9	5.3	6.4	6.6	5.6
	MIDNIGHT-MIDNIGHT (OKTAS)	32	6.5	6.2	5.7	5.3	5.0	4.7	4.3	4.5	4.7	5.2	6.3	6.5	5.4
	MEAN NO. DAYS WITH:														
	CLEAR	56	2.0	2.4	4.6	6.1	6.0	7.2	7.8	7.7	7.0	6.4	2.1	2.0	61.3
PARTLY CLOUDY	56	6.6	6.7	8.1	7.7	9.7	10.8	12.5	11.7	10.5	8.4	6.1	5.6	104.4	
CLOUDY	56	22.4	19.2	18.3	16.3	15.4	12.1	10.7	11.7	12.6	16.3	21.8	23.4	200.2	
PR	MEAN STATION PRESSURE (IN)	26	29.43	29.45	29.42	29.37	29.38	29.37	29.40	29.44	29.47	29.47	29.45	29.44	29.42
	MEAN SEA-LEVEL PRES. (IN)	15	30.06	30.08	30.05	29.98	29.97	29.97	29.98	30.04	30.05	30.08	30.07	30.08	30.03
WINDS	MEAN SPEED (MPH)	41	12.0	11.5	11.7	11.4	9.9	9.2	8.6	8.3	8.7	9.2	10.9	11.3	10.2
	PREVAIL. DIR (TENS OF DEGS)	25	25	25	25	25	25	24	23	22	21	25	25	25	25
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	41	59	45	41	44	39	52	36	68	38	41	36	68
	DIR. (TENS OF DEGS)		25	25	26	25	27	36	20	30	27	25	17	26	27
	YEAR OF OCCURRENCE		1997	1997	1998	1997	1998	1998	1999	1999	1998	1997	1999	1998	SEP 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	3	49	75	61	62	63	48	63	53	89	48	52	49	89
DIR. (TENS OF DEGS)		24	24	26	25	28	36	20	31	29	25	17	24	29	
YEAR OF OCCURRENCE		1997	1997	1998	1997	1998	1998	1999	1999	1998	1997	1999	1998	SEP 1998	
PRECIPITATION	NORMAL (IN)	30	2.08	2.10	2.28	2.61	2.72	3.00	2.71	3.40	2.97	2.44	2.92	2.73	31.96
	MAXIMUM MONTHLY (IN)	59	5.79	5.07	5.42	4.90	6.62	7.11	9.70	6.00	6.30	7.85	6.99	5.05	9.70
	YEAR OF OCCURRENCE		1978	1950	1942	1944	1974	1998	1947	1984	1977	1955	1985	1944	JUL 1947
	MINIMUM MONTHLY (IN)	59	0.72	0.66	0.47	1.18	0.36	0.22	0.61	0.76	0.28	0.23	0.44	0.62	0.22
	YEAR OF OCCURRENCE		1988	1987	1958	1995	1977	1963	1994	1951	1960	1963	1976	1958	JUN 1963
	MAXIMUM IN 24 HOURS (IN)	59	2.24	2.43	2.21	2.22	3.85	2.86	3.25	2.52	3.54	3.13	3.13	1.60	3.85
	YEAR OF OCCURRENCE		1998	1950	1942	1991	1974	1950	1987	1998	1979	1995	1945	1978	MAY 1974
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	16.6	15.5	14.0	13.0	11.4	10.8	9.8	10.9	11.1	12.5	15.4	18.1	159.1	
PRECIPITATION ≥ 1.00	30	0.1	0.2	0.1	0.2	0.3	0.5	0.5	0.8	0.7	0.2	0.3	0.2	4.1	
SNOWFALL	NORMAL (IN)	30	25.1	22.6	12.3	4.6	0.4	0.0	0.0	0.0	0.0	0.1	6.3	21.6	93.0
	MAXIMUM MONTHLY (IN)	59	60.4	64.8	45.0	20.2	10.9	T	T	T	T	2.6	24.9	46.1	64.8
	YEAR OF OCCURRENCE		1978	1958	1999	1979	1989	1998	1996	1965	1994	1993	1996	1981	FEB 1958
	MAXIMUM IN 24 HOURS (IN)	59	23.0	22.8	23.3	10.4	10.8	T	T	T	T	2.6	14.1	19.1	23.3
	YEAR OF OCCURRENCE		1996	1978	1999	1990	1989	1998	1990	1965	1994	1993	1995	1978	MAR 1999
	MAXIMUM SNOW DEPTH (IN)	51	32	34	34	10	4	0	0	0	0	1	8	40	40
	YEAR OF OCCURRENCE		1978	1966	1999	1975	1989					1957	1972	1959	DEC 1959
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	7.7	7.2	3.6	1.2	0.1	0.0	0.0	0.0	0.0	0.0	2.0	6.9	28.7	

PRECIPITATION (inches) 1999 ROCHESTER, NY (ROC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.80	2.28	1.49	2.58	3.03	3.74	4.91	3.88	2.49	3.96	3.50	4.12	37.78
1971	2.66	4.21	3.43	1.28	1.71	3.52	5.59	3.18	1.79	1.34	1.96	3.49	34.16
1972	1.50	3.96	2.19	2.68	3.32	6.56	1.43	3.14	3.84	2.25	4.83	2.58	38.28
1973	1.28	1.70	2.92	3.21	2.68	2.84	1.14	1.94	1.41	2.67	3.82	3.62	29.23
1974	1.75	2.06	3.61	2.60	6.62	2.59	2.82	3.64	3.48	1.34	3.23	2.86	36.60
1975	1.83	2.82	2.74	1.43	2.85	5.35	1.18	2.31	3.15	1.83	1.35	3.76	30.60
1976	2.33	1.67	3.54	3.81	2.63	3.37	5.15	3.04	2.13	4.73	0.44	1.48	34.32
1977	1.49	0.97	2.18	2.49	0.36	1.33	3.26	5.65	6.30	2.64	3.78	4.65	35.10
1978	5.79	2.40	1.48	2.25	2.03	1.30	2.17	2.66	3.63	2.56	1.14	4.35	31.76
1979	4.18	2.40	1.76	3.78	3.14	1.85	3.16	2.05	5.32	2.60	1.80	2.86	34.90
1980	1.11	1.16	3.83	2.35	1.49	6.77	1.90	3.44	3.57	3.73	2.52	2.45	34.32
1981	1.24	3.13	1.04	1.95	2.27	2.70	4.60	4.44	5.37	3.29	2.18	2.78	34.99
1982	4.16	1.01	1.73	1.63	1.77	3.92	3.13	3.00	3.57	1.79	3.95	2.17	31.83
1983	1.43	1.23	2.45	3.50	3.44	2.40	1.13	5.43	1.56	3.26	4.91	4.47	35.21
1984	1.62	2.97	2.08	3.05	5.47	1.67	1.90	6.00	3.34	0.76	1.47	3.31	33.64
1985	2.49	1.78	3.47	1.30	2.08	2.63	1.86	1.11	2.49	2.34	6.99	1.46	30.00
1986	1.63	2.46	1.90	3.80	1.64	4.27	3.13	3.29	5.11	3.56	1.93	3.56	36.28
1987	1.89	0.66	1.98	3.68	1.19	3.94	5.85	3.92	4.60	1.65	2.74	1.98	34.08
1988	0.72	2.18	1.62	2.32	1.73	1.10	4.30	3.81	1.69	2.34	1.68	1.11	24.60
1989	1.18	1.55	3.69	1.62	5.99	5.65	0.98	2.46	2.82	3.13	2.01	1.58	32.66
1990	1.61	3.93	1.56	3.58	5.76	2.88	3.05	3.59	3.36	4.37	2.27	4.18	40.14
1991	1.69	1.16	4.70	4.07	2.43	1.19	2.37	1.80	2.86	1.65	2.39	2.92	29.23
1992	1.46	1.87	3.53	3.43	2.83	1.98	6.03	4.45	3.02	1.78	2.90	2.98	36.26
1993	2.32	1.52	2.44	3.07	1.24	2.76	1.67	1.67	4.37	3.21	3.27	1.60	29.14
1994	2.68	1.63	1.70	4.08	2.56	2.43	0.61	4.27	2.68	1.34	3.24	2.32	29.54
1995	2.46	1.58	1.15	1.18	1.75	2.07	3.85	3.05	1.50	5.70	4.21	1.50	30.00
1996	3.18	1.72	2.07	4.84	3.51	6.65	2.18	3.33	5.09	5.40	4.12	2.97	45.06
1997	2.03	2.40	3.88	1.33	2.12	3.01	1.94	4.22	5.36	1.94	3.57	2.88	34.68
1998	5.63	2.34	3.50	1.81	2.63	7.11	6.09	5.39	3.00	1.45	1.41	1.60	41.96
1999	3.92	0.69	3.28	2.07	2.72	2.52	1.78	5.71	3.41	2.12	2.86	2.06	33.14
POR= 171 YRS	2.48	2.33	2.62	2.61	2.89	3.02	3.00	2.94	2.73	2.71	2.71	2.49	32.53

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AVERAGE TEMPERATURE (°F) 1999 ROCHESTER, NY (ROC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	18.0	23.7	30.8	48.4	59.5	68.1	72.2	70.1	63.0	53.9	41.4	25.5	47.9
1971	19.5	26.9	28.5	41.1	54.0	67.5	68.8	68.8	67.4	59.0	38.4	30.9	47.6
1972	26.0	23.4	30.3	42.2	60.4	65.2	73.0	69.8	64.3	47.6	37.0	33.1	47.7
1973	28.7	22.2	42.5	48.0	56.1	70.7	73.4	73.0	62.5	55.0	43.0	31.2	50.5
1974	27.1	22.5	33.0	49.4	53.9	65.7	71.3	70.6	59.2	47.6	39.5	31.4	47.6
1975	29.5	28.4	31.6	39.3	63.2	67.1	73.0	70.0	58.4	53.1	47.2	27.8	49.1
1976	19.8	33.3	37.2	48.6	55.4	69.8	69.2	68.4	60.9	47.5	35.4	23.6	47.4
1977	15.5	25.4	39.8	47.9	60.7	64.8	72.9	68.7	62.7	49.4	43.6	28.4	48.3
1978	22.9	16.2	29.7	43.6	60.2	67.4	72.6	71.6	62.4	51.0	41.0	30.0	47.4
1979	21.5	13.7	38.6	44.0	56.4	66.2	72.3	67.1	61.3	50.3	43.0	32.3	47.2
1980	24.0	19.7	32.4	47.8	60.0	63.1	72.9	74.3	63.7	48.8	38.8	24.7	47.5
1981	15.7	32.3	34.5	48.0	57.2	67.3	71.9	69.4	59.8	47.3	39.9	28.7	47.7
1982	16.1	23.0	33.5	43.2	60.9	63.6	72.0	66.1	62.8	52.7	43.4	37.4	47.9
1983	27.4	29.1	37.2	43.9	53.8	66.7	73.8	70.7	63.9	52.9	40.7	25.1	48.8
1984	20.4	33.2	26.5	47.5	52.6	66.8	69.2	72.0	60.6	54.9	40.7	35.9	48.4
1985	21.9	25.6	36.7	49.6	58.6	61.7	68.8	68.7	63.8	51.0	41.4	25.0	47.7
1986	25.0	24.5	37.0	47.9	59.8	63.3	69.8	65.7	59.8	49.9	36.9	31.7	47.6
1987	25.3	23.6	37.1	49.7	59.9	67.9	72.7	67.3	61.6	47.1	40.6	32.6	48.8
1988	25.0	23.7	34.7	45.0	58.7	64.2	73.7	71.1	60.1	45.8	42.6	29.4	47.8
1989	30.3	22.5	32.3	42.1	56.3	67.4	72.8	68.5	61.7	52.6	38.1	17.1	46.8
1990	33.6	29.3	37.3	48.8	54.4	67.2	70.7	69.9	60.7	52.1	42.4	33.8	50.0
1991	25.1	30.5	37.0	50.0	62.8	68.3	72.3	70.3	60.5	52.1	39.0	30.7	49.9
1992	26.2	27.2	30.2	44.1	57.1	63.5	66.6	66.3	60.9	46.4	38.9	30.2	46.5
1993	27.5	18.7	30.0	46.9	56.6	65.5	72.4	71.4	59.0	48.0	39.0	28.4	47.0
1994	14.9	21.1	32.0	48.0	54.2	67.8	73.5	69.2	62.4	52.4	45.8	34.8	48.0
1995	32.1	23.8	38.5	41.6	57.2	69.5	73.0	73.3	60.4	55.2	35.2	25.3	48.8
1996	23.7	24.6	29.7	43.3	54.6	68.0	68.1	69.3	62.0	51.2	34.3	33.6	46.9
1997	24.3	30.5	32.9	43.8	50.4	67.1	67.8	66.3	59.3	49.1	37.4	31.2	46.7
1998	31.6	32.6	38.1	47.7	62.9	65.7	69.6	69.8	62.7	51.2	41.8	34.6	50.7
1999	22.9	30.6	30.8	45.3	59.6	68.3	74.3	67.1	64.0	50.9	44.9	32.2	49.2
POR= 128 YRS	24.7	24.8	32.9	45.1	56.9	66.4	71.3	69.3	62.5	51.3	39.8	29.0	47.8

HEATING DEGREE DAYS (base 65°F) 1999 ROCHESTER, NY (ROC)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	3	11	126	349	699	1218	1405	1059	1122	707	342	49	7090
1971-72	17	33	74	194	792	1048	1200	1199	1071	677	161	78	6544
1972-73	7	24	92	534	833	982	1118	1189	690	519	279	17	6284
1973-74	2	14	162	305	653	1040	1167	1187	983	475	352	59	6399
1974-75	1	1	209	535	755	1034	1096	1017	1031	764	139	52	6634
1975-76	4	14	194	365	525	1146	1395	914	858	507	300	35	6257
1976-77	11	27	173	538	879	1279	1524	1103	777	523	204	89	7127
1977-78	9	44	113	477	634	1127	1298	1360	1087	634	220	63	7066
1978-79	5	1	136	428	711	1077	1342	1432	813	626	310	79	6960
1979-80	13	37	155	468	655	1006	1264	1306	1003	510	195	125	6737
1980-81	1	0	108	498	782	1243	1522	908	938	507	260	26	6793
1981-82	6	12	201	546	748	1119	1510	1171	972	648	162	67	7162
1982-83	10	54	113	377	643	847	1161	998	854	627	347	78	6109
1983-84	9	8	121	387	723	1228	1376	917	1187	520	395	50	6921
1984-85	14	7	162	307	724	897	1330	1097	869	471	217	119	6214
1985-86	15	23	121	429	700	1231	1235	1129	864	506	206	100	6559
1986-87	16	62	175	462	840	1026	1223	1153	858	454	234	39	6542
1987-88	7	50	139	547	722	997	1232	1192	933	594	220	126	6759
1988-89	6	40	164	596	664	1095	1070	1184	1009	682	288	33	6831
1989-90	0	33	149	383	801	1478	967	993	853	520	327	46	6550
1990-91	7	6	171	406	669	959	1230	957	862	458	170	29	5924
1991-92	2	1	196	408	776	1057	1195	1088	1069	621	259	89	6761
1992-93	26	46	172	571	774	1071	1158	1289	1077	538	263	66	7051
1993-94	0	10	214	525	775	1127	1550	1221	1015	505	345	56	7343
1994-95	1	16	106	386	568	928	1015	1147	811	694	239	33	5944
1995-96	13	7	162	300	885	1224	1271	1163	1086	647	347	16	7121
1996-97	19	6	140	421	915	968	1255	960	989	628	448	45	6794
1997-98	32	29	181	492	822	1041	1029	901	837	513	109	99	6085
1998-99	4	14	115	424	690	935	1295	955	1054	583	194	57	6320
1999-	2	25	100	431	595	1008							

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COOLING DEGREE DAYS (base 65°F) 1999 ROCHESTER, NY (ROC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	16	47	148	235	176	69	13	0	0	704
1971	0	0	0	0	10	133	143	159	155	15	0	0	615
1972	0	0	0	0	24	94	261	179	79	0	0	0	637
1973	0	0	0	15	6	194	267	269	96	4	0	0	851
1974	0	0	0	13	14	88	204	181	40	0	0	0	540
1975	0	0	0	0	89	121	257	178	5	6	0	0	656
1976	0	0	0	24	9	189	150	138	55	1	0	0	566
1977	0	0	3	16	80	88	260	164	50	0	1	0	662
1978	0	0	0	0	77	141	245	212	66	3	0	0	744
1979	0	0	0	1	52	121	244	112	49	18	0	0	597
1980	0	0	0	0	46	73	253	294	76	2	0	0	744
1981	0	0	0	5	23	102	228	156	50	0	0	0	564
1982	0	0	0	3	40	30	232	95	52	3	1	0	456
1983	0	0	0	0	7	136	289	192	96	20	0	0	740
1984	0	0	0	1	14	113	152	233	35	1	0	0	549
1985	0	0	0	15	23	27	139	145	90	0	0	0	439
1986	0	0	1	0	50	53	168	94	28	0	0	0	394
1987	0	0	0	1	82	131	254	127	42	0	0	0	637
1988	0	0	0	0	34	107	284	232	29	7	0	0	693
1989	0	0	0	0	26	111	248	153	60	3	0	0	601
1990	0	0	3	41	5	122	192	164	45	14	0	0	586
1991	0	0	0	14	108	135	234	175	68	14	0	0	748
1992	0	0	0	1	19	51	84	96	57	0	0	0	308
1993	0	0	0	0	9	86	239	214	42	5	0	0	595
1994	0	0	0	0	16	145	271	152	36	2	1	0	623
1995	0	0	0	0	3	175	266	269	33	5	0	0	751
1996	0	0	0	1	31	115	120	147	58	0	0	0	472
1997	0	0	0	1	0	114	126	75	15	8	0	0	339
1998	0	0	9	0	48	125	152	168	53	4	0	0	559
1999	0	0	0	0	38	161	296	93	77	0	0	0	665

SNOWFALL (inches) 1999 ROCHESTER, NY (ROC)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.2	3.6	44.2	34.1	29.7	29.7	1.2	0.0	0.0	142.7
1971-72	0.0	0.0	0.0	0.0	11.2	13.8	18.1	35.7	19.0	7.3	0.0	0.0	105.1
1972-73	0.0	0.0	0.0	0.2	16.9	22.7	8.9	18.4	4.4	1.5	T	0.0	73.0
1973-74	0.0	0.0	0.0	0.0	4.2	23.4	14.4	26.6	22.3	8.2	T	0.0	99.1
1974-75	0.0	0.0	0.0	0.3	4.6	26.5	10.8	23.2	10.9	14.9	0.0	0.0	91.2
1975-76	0.0	0.0	0.0	T	1.8	28.3	29.9	8.8	15.2	1.8	0.4	0.0	86.2
1976-77	0.0	0.0	0.0	0.5	6.5	24.5	30.2	15.0	13.0	1.8	0.6	0.0	92.1
1977-78	0.0	0.0	0.0	T	12.7	35.2	60.4	40.7	7.5	4.2	0.2	0.0	160.9
1978-79	0.0	0.0	0.0	T	3.3	30.9	36.8	39.1	8.2	20.2	0.0	0.0	138.5
1979-80	0.0	0.0	0.0	0.2	1.2	12.2	13.1	24.0	21.2	0.3	0.0	0.0	72.2
1980-81	0.0	0.0	0.0	T	8.4	31.8	31.5	9.3	12.0	1.4	0.0	0.0	94.4
1981-82	0.0	0.0	0.0	0.1	2.4	46.1	43.6	14.9	8.9	12.4	0.0	0.0	128.4
1982-83	0.0	0.0	0.0	T	3.0	11.6	10.2	13.6	9.3	12.2	T	0.0	59.9
1983-84	0.0	0.0	0.0	0.0	17.6	19.6	23.4	27.8	29.1	0.5	T	0.0	118.0
1984-85	0.0	0.0	0.0	0.0	1.6	11.6	36.8	26.1	8.4	2.6	0.0	0.0	87.1
1985-86	0.0	0.0	0.0	0.0	7.6	18.3	15.5	17.9	9.3	2.1	T	0.0	70.7
1986-87	0.0	0.0	0.0	0.0	7.4	9.3	29.6	13.0	5.3	2.5	0.0	0.0	67.1
1987-88	0.0	0.0	0.0	T	4.6	19.3	9.8	29.4	5.6	1.1	0.0	0.0	69.8
1988-89	0.0	0.0	0.0	0.1	0.2	10.3	15.0	30.6	15.6	3.9	10.9	0.0	86.6
1989-90	0.0	0.0	0.0	T	6.5	32.8	14.0	31.3	5.4	15.8	T	0.0	105.8
1990-91	T	0.0	0.0	T	4.4	18.2	26.5	16.1	2.0	1.1	0.0	0.0	68.3
1991-92	0.0	0.0	0.0	0.0	13.7	23.9	18.3	12.8	38.1	3.8	0.0	0.0	110.6
1992-93	0.0	0.0	0.0	T	9.5	29.3	22.4	31.2	37.1	2.0	T	0.0	131.5
1993-94	0.0	0.0	T	2.6	9.8	14.0	43.0	35.1	12.1	9.6	0.0	0.0	126.2
1994-95	0.0	0.0	T	0.0	2.8	7.6	12.8	23.6	5.3	4.1	0.0	0.0	56.2
1995-96	0.0	0.0	0.0	T	23.4	20.5	36.9	14.1	28.6	5.3	1.5	0.0	130.3
1996-97	T	0.0	0.0	0.0	24.9	14.0	24.8	13.3	26.4	1.3	T	0.0	104.7
1997-98	0.0	0.0	0.0	0.1	21.6	26.4	14.6	9.1	27.9	0.0	0.0	T	99.7
1998-99	0.0	0.0	T	0.0	0.1	10.1	48.8	4.7	45.0	2.9	0.0	0.0	111.6
1999-	0.0	0.0	0.0	0.0	4.7	19.1							
POR= 58 YRS	T	T	T	0.2	7.1	19.3	23.0	21.4	15.0	3.5	0.7	0.0	90.2

WBAN : 14768

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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1999  
ROCHESTER,  
NEW YORK (ROC)

Rochester and the Genesee Valley experience a fairly humid, continental type climate, which is strongly modified by the proximity of the Great Lakes. Precipitation is rather evenly distributed throughout the year in quantity, but frequency is much higher during the cloudy winter months than in the sunny ones. Snowfall is heavy, but is highly variable over short distances.

Winters in general are cloudy, cold and snowy..but are changeable and include frequent thaws and rain as well. Snow covers the ground more often than not from christmas into early March..but periods of bare ground are not uncommon. About half of the annual snowfall comes from "lake-effect" process and is very localized. This feature develops when cold air crosses the warmer lake waters and becomes saturated.. creating clouds and precipitation downwind. The exact location of these snowbands are determined by the direction of the wind. Areas east of Rochester receive the most snow from this process..as northwest winds have a longer "fetch" off Lake Ontario..while areas south of the city get somewhat less. Lake Erie can even contribute some snow from this process if a west or southwest wind is strong enough. Since Lake Ontario does not freeze in most winters..this Lake effect machine can remain active throughout the winter. The Rochester area is also subject to occasional general or "synoptic" snowfalls..but the worst effects from these usually pass by to the east. Total season snowfall ranges from 70 inches south of the city to about 90 inches in Rochester to over 120 inches along the lakeshore east of the city. About 50 inches of this total results from general snows..the rest is due to the Lake effect machine. The lake does modify any extreme cold as the mercury falls below zero on only about six nights in an average winter..with anything below -10 extremely rare.

Spring comes slowly to the region. The last frosts usually occur by April 30 near Lake Ontario..but as late as mid-May south of the Thruway. The spring months are actually the driest months statistically, due in part to the stabilizing effects of the Great Lakes, although soils are wet. Sunshine increases markedly in May.

Summers are warm and sunny across the region. The average temperature is in the 70 to 72 degree range. Rain can be expected on every third or fourth day.. almost always in the form of showers and thunderstorms. This activity is more common inland than near the Lake. Completely overcast days in summer are rare. Severe weather is not common..but a few cases of damaging winds and small tornadoes occur each year. The greatest risk of this type of activity is south of the Thruway. There usually are several periods of uncomfortably warm and muggy weather in an average summer..but only about nine days reach 90-degree mark in an average year. Still, the area usually experiences some of the most delightful summer weather in the East.

Autumn is pleasant, but rather brief. Mild and dry conditions predominate through September and much of October, but colder airmasses cross the Great Lakes with increasing frequency starting in late October, and result in a drastic increase in cloud cover across the region in late October and early November. Although the first frosts may not occur until late October near Lake Ontario, the firstlake effect snows of the season follow soon after...usually by mid November. These early snows melt off quickly, with a general snow cover seldom established before mid December. The growing season is relatively long for the latitude...average about 180 days. The long growing season...combined with ample spring moisture and abundant summer sunshine...is beneficial for the many fruit orchards and wineries...especially near the Lake Ontario shore and Finger Lakes.

