

2003

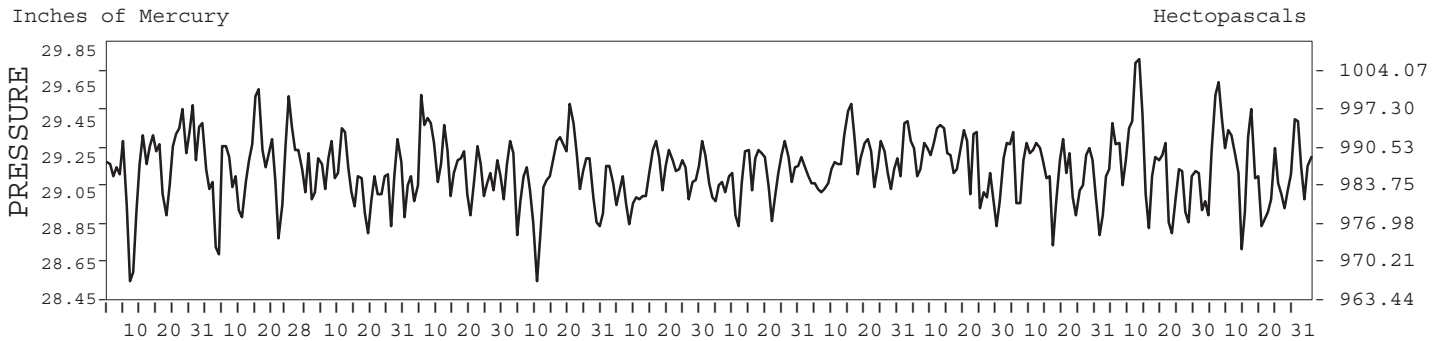
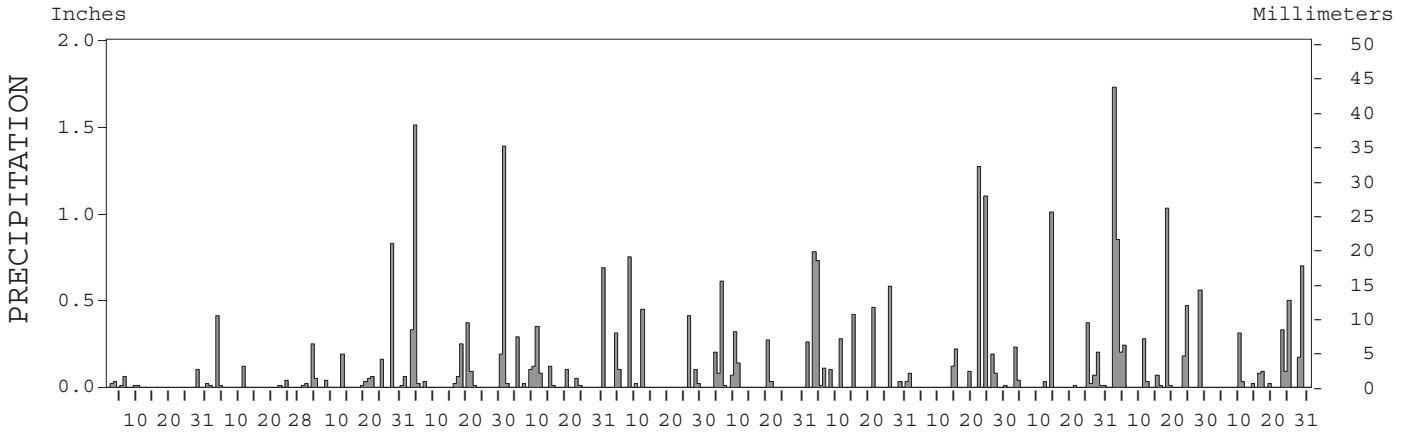
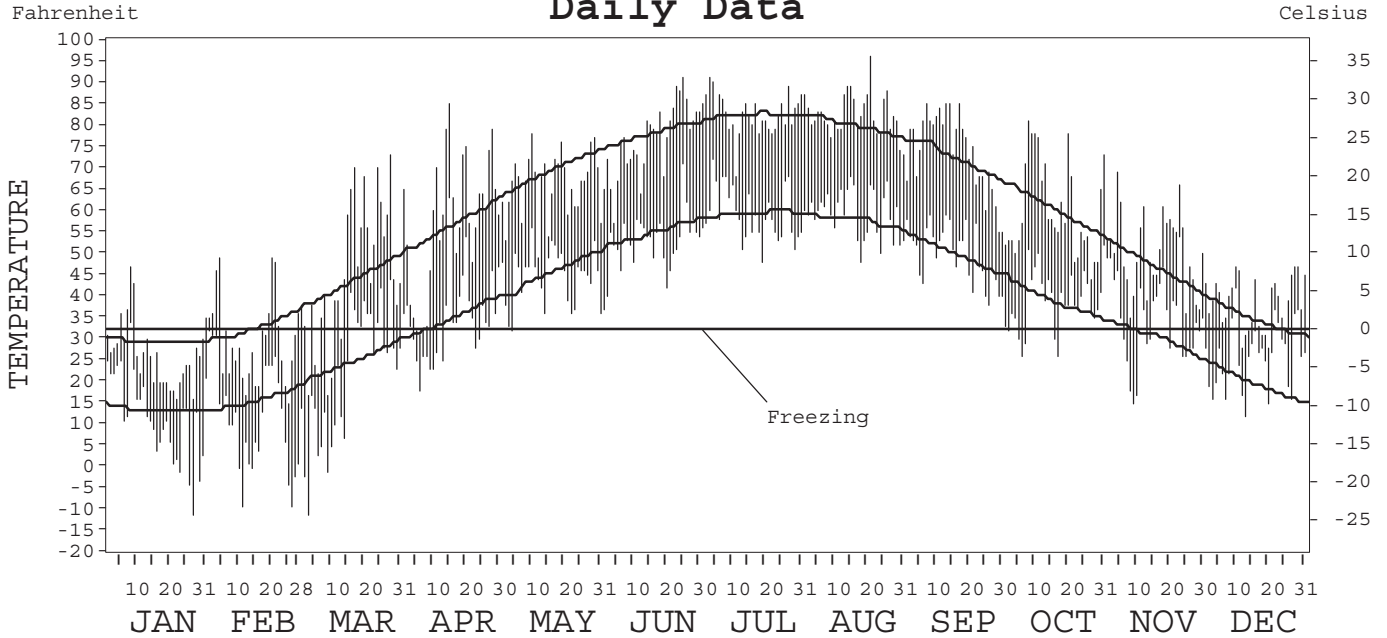
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2559

FLINT, MICHIGAN (FNT)

Daily Data



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METEOROLOGICAL DATA FOR 2003

FLINT, MI (FNT)

LATITUDE: 42° 58' 00" N LONGITUDE: 83° 44' 58" W ELEVATION (FT): GRND: 780 BARO: 783 TIME ZONE: EASTERN (UTC + 5) WBAN: 14826

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	26.5	29.6	45.0	57.1	66.1	76.5	82.5	82.5	73.9	60.3	50.2	38.4	57.4	
	HIGHEST DAILY MAXIMUM	47	49	73	85	78	91	91	96	85	81	69	47	96	
	DATE OF OCCURRENCE	08	20+	28	15	10	25	03	21	17+	08	04	29+	AUG 21	
	MEAN DAILY MINIMUM	11.8	11.4	21.7	34.6	44.5	52.6	59.0	59.3	49.8	38.8	34.7	25.8	37.0	
	LOWEST DAILY MINIMUM	-11	-9	-11	18	32	37	48	48	38	26	15	12	-11	
	DATE OF OCCURRENCE	27	26+	03	06	04	01	19	18	26	17+	09	13	MAR 03	
	AVERAGE DRY BULB	19.2	20.5	33.4	45.9	55.3	64.6	70.8	70.9	61.9	49.6	42.5	32.1	47.2	
	MEAN WET BULB	18.6	19.2	31.0	40.4	51.1	59.4	64.6	65.8	56.7	45.4	39.9	30.0	43.5	
	MEAN DEW POINT	14.1	13.6	25.4	33.1	46.4	54.7	60.1	62.5	52.6	40.5	35.8	26.1	38.7	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	1	2	1	0	0	0	0	0	4
MAXIMUM ≤ 32°	26	19	6	3	0	0	0	0	0	0	0	7	61		
MINIMUM ≤ 32°	30	28	21	11	1	0	0	0	0	6	13	25	135		
MINIMUM ≤ 0°	4	6	3	0	0	0	0	0	0	0	0	0	13		
H/C	HEATING DEGREE DAYS	1412	1238	973	575	294	76	1	5	132	470	670	1010	6856	
	COOLING DEGREE DAYS	0	0	0	9	2	68	189	193	46	1	0	0	508	
RH	MEAN (PERCENT)	77	74	71	66	73	70	70	76	74	72	78	80	73	
	HOUR 01 LST	82	80	80	72	81	83	86	90	90	80	83	83	82	
	HOUR 07 LST	82	83	86	77	86	82	84	94	94	86	86	84	85	
	HOUR 13 LST	68	64	56	56	63	58	54	58	53	56	69	71	60	
	HOUR 19 LST	76	68	65	57	64	59	56	63	65	69	74	79	66	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	1	5	1	3	3	1	4	1	0	1	2	24	
	THUNDERSTORMS	0	0	2	3	5	5	4	8	2	0	1	1	31	
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.)	29.21	29.19	29.13	29.19	29.12	29.13	29.14	29.23	29.23	29.15	29.19	29.20	29.18	
	MEAN SEA-LEVEL PRESS. (IN.)	30.07	30.05	29.97	30.03	29.94	29.95	29.95	30.04	30.04	29.98	30.02	30.05	30.01	
WINDS	RESULTANT SPEED (MPH)	5.9	2.9	2.2	2.6	2.3	1.2	1.8	0.6	2.6	4.3	4.5	4.5	2.0	
	RES. DIR. (TENS OF DEGS.)	27	26	22	06	05	25	27	30	21	25	24	25	25	
	MEAN SPEED (MPH)	10.9	10.1	9.2	10.1	9.2	7.1	7.2	6.0	7.7	8.3	9.9	10.0	8.8	
	PREVAIL. DIR. (TENS OF DEGS.)	27	22	18	06	10	24	22	20	27	20	18	27	27	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	30	36	32	35	40	30	37	35	30	31	41	38	41	
	DIR. (TENS OF DEGS.)	30	30	01	26	25	21	26	24	27	28	28	27	28	
	DATE OF OCCURRENCE	13	11+	08	20	11	08	04	21	19	01	13	31	NOV 13	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	37	45	43	52	44	44	51	45	35	38	49	49	52	
DIR. (TENS OF DEGS.)	30	27	36	26	25	18	25	24	27	28	30	27	26		
DATE OF OCCURRENCE	13	04	08	20	01	08	04	21	19	01	13+	31	APR 20		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.26	0.60	1.71	2.94	3.35	2.16	1.73	3.79	3.16	2.00	5.66	2.34	29.70	
	GREATEST 24-HOUR (IN.)	0.10	0.42	0.83	1.57	1.39	0.75	0.62	0.78	1.27	1.01	1.81	0.83	1.81	
	DATE OF OCCURRENCE	28	03-04	28	03-04	01	08	06-07	03	22	14	02-03	28-29	NOV 02-03	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	8	6	13	12	14	8	9	12	9	11	13	11	126	
PRECIPITATION ≥ 0.10	1	2	4	5	8	6	5	9	5	4	9	5	63		
PRECIPITATION ≥ 1.00	0	0	0	1	1	0	0	0	2	1	2	0	7		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	8.4	12.5	9.8	3.6	0.0	0.0	0.0	T	0.0	0.0	2.5	10.3	47.1	
	GREATEST 24-HOUR (IN.)	1.5	3.7	2.4	1.6	0.0	0.0	0.0	T	0.0	0.0	2.5	5.0	5.0	
	DATE OF OCCURRENCE	03	11	04	07				21			28	25	DEC 25	
	MAXIMUM SNOW DEPTH (IN.)	2	5	5	1	0	0	0	0	0	0	1	5	5	
	DATE OF OCCURRENCE	31+	12	14+	09+							29	26	DEC 26	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3	5	4	3	0	0	0	0	0	0	1	3	19		

NORMALS, MEANS, AND EXTREMES

FLINT, MI (FNT)

LATITUDE: 42° 58' 00" N LONGITUDE: 83° 44' 58" W ELEVATION (FT): GRND: 780 BARO: 783 TIME ZONE: EASTERN (UTC + 5) WBAN: 14826

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	29.2	32.3	43.1	56.2	69.0	77.7	82.0	79.5	71.9	59.7	46.3	34.2	56.8
	MEAN DAILY MAXIMUM	55	29.4	32.3	42.0	56.2	68.2	77.7	81.8	79.8	72.1	60.5	46.4	34.2	56.7
	HIGHEST DAILY MAXIMUM	47	61	68	80	87	93	101	101	98	94	89	76	70	101
	YEAR OF OCCURRENCE		1997	1999	2000	2002	1988	1988	1995	2001	2002	2002	1978	2001	JUL 1995
	MEAN OF EXTREME MAXS.	55	48.1	50.6	66.1	77.6	84.1	90.4	92.3	90.7	86.7	78.7	66.4	54.1	73.8
	NORMAL DAILY MINIMUM	30	13.3	15.3	24.3	34.6	45.2	54.6	59.1	57.4	49.4	38.6	29.8	19.1	36.7
	MEAN DAILY MINIMUM	55	15.1	16.4	24.6	35.5	45.5	55.1	59.4	57.7	50.2	40.3	31.3	20.8	37.7
	LOWEST DAILY MINIMUM	47	-25	-22	-12	6	22	33	40	37	26	19	6	-13	-25
	YEAR OF OCCURRENCE		1976	1967	1978	1982	1966	1998	2001	1982	1991	1974	1976	2000	JAN 1976
	MEAN OF EXTREME MINS.	55	-6.4	-4.5	4.7	20.8	31.3	40.3	46.3	44.4	34.3	25.1	15.1	0.0	21.0
	NORMAL DRY BULB	30	21.3	23.8	33.7	45.4	57.1	66.2	70.6	68.5	60.7	49.2	38.1	26.7	46.8
	MEAN DRY BULB	55	22.4	24.4	33.5	45.8	56.8	66.4	70.6	68.7	61.2	50.5	38.9	27.5	47.2
	MEAN WET BULB	20	22.4	24.0	30.8	41.5	51.7	60.6	64.8	63.8	56.6	46.0	36.2	26.6	43.8
	MEAN DEW POINT	20	18.0	19.3	25.1	34.9	45.6	55.8	60.5	60.6	53.1	41.5	31.9	23.1	39.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.3	1.7	3.2	1.5	0.6	0.0	0.0	0.0	7.3	
MAXIMUM ≤ 32°	30	18.5	14.4	5.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	12.0	52.8	
MINIMUM ≤ 32°	30	29.0	25.3	23.0	11.1	1.6	0.0	0.0	0.0	0.4	5.8	17.1	27.2	140.5	
MINIMUM ≤ 0°	30	4.6	3.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	10.5	
H/C	NORMAL HEATING DEG. DAYS	30	1341	1147	957	577	267	66	13	28	168	478	791	1172	7005
	NORMAL COOLING DEG. DAYS	30	0	0	1	5	33	110	199	151	52	4	0	0	555
RH	NORMAL (PERCENT)	30	77	75	71	66	66	69	71	75	76	74	76	79	73
	HOUR 01 LST	30	81	79	77	75	76	80	84	87	87	82	81	82	81
	HOUR 07 LST	30	82	81	81	79	78	81	85	90	90	85	83	83	83
	HOUR 13 LST	30	72	69	62	55	54	56	55	59	59	60	68	74	62
	HOUR 19 LST	30	76	72	66	59	56	58	59	65	69	70	75	78	67
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	63	1.8	1.6	1.9	0.8	1.2	0.9	1.0	1.9	2.0	2.1	1.5	1.9	18.6
	THUNDERSTORMS	63	0.2	0.2	1.2	2.8	4.2	5.7	6.0	5.6	3.5	1.3	0.8	0.2	31.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1						6.4							
	MIDNIGHT-MIDNIGHT (OKTAS)	1						7.2							
	MEAN NO. DAYS WITH:														
CLEAR	1		2.0	3.0		3.0	6.0								
PARTLY CLOUDY	1	2.0	3.0	5.0		9.0	2.0								
CLOUDY	1	4.0	6.0	9.0		6.0	13.0								
PR	MEAN STATION PRESSURE (IN)	31	29.20	29.20	29.20	29.10	29.10	29.10	29.20	29.20	29.20	29.21	29.21	29.20	29.18
	MEAN SEA-LEVEL PRES. (IN)	20	30.05	30.08	30.06	29.98	29.98	29.96	29.99	30.04	30.05	30.07	30.05	30.08	30.03
WINDS	MEAN SPEED (MPH)	46	11.3	10.8	11.4	11.2	9.9	8.6	8.0	7.5	8.6	9.5	11.1	11.0	9.9
	PREVAIL. DIR (TENS OF DEGS)	32	23	27	27	27	18	20	24	20	18	20	23	23	23
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	8	37	40	40	41	40	36	40	35	32	39	41	38	41
	DIR. (TENS OF DEGS)		25	28	25	30	25	28	33	24	27	25	28	27	28
	YEAR OF OCCURRENCE		1996	2002	2002	2002	2003	2000	1998	2003	1997	1996	2003	2003	NOV 2003
	MAXIMUM 5-SECOND:														
SPEED (MPH)	8	52	49	51	52	49	46	51	46	39	49	55	49	55	
DIR. (TENS OF DEGS)		18	25	27	26	27	29	25	27	26	26	22	27	22	
YEAR OF OCCURRENCE		1996	1997	2002	2003	2000	2000	2003	1996	1997	1996	1998	2003	NOV 1998	
PRECIPITATION	NORMAL (IN)	30	1.57	1.35	2.22	3.13	2.74	3.07	3.17	3.43	3.76	2.34	2.65	2.18	31.61
	MAXIMUM MONTHLY (IN)	62	3.56	5.28	4.33	5.90	7.35	6.52	9.35	11.04	10.86	6.59	5.66	4.66	11.04
	YEAR OF OCCURRENCE		1947	1954	1948	1947	1945	1994	1992	1975	1986	2001	2003	1971	AUG 1975
	MINIMUM MONTHLY (IN)	62	0.07	0.17	0.25	0.62	0.34	0.63	0.73	0.45	0.29	0.33	0.66	0.44	0.07
	YEAR OF OCCURRENCE		1945	1969	1958	1942	1988	1988	1978	1969	2002	1944	1980	1969	JAN 1945
	MAXIMUM IN 24 HOURS (IN)	62	1.81	2.85	2.33	2.89	2.25	3.55	3.72	4.45	6.04	3.19	2.30	1.77	6.04
	YEAR OF OCCURRENCE		1967	1954	1948	1976	1974	1943	1957	1968	1950	1981	1995	1971	SEP 1950
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	13.8	10.9	12.2	12.9	10.7	10.5	9.7	10.1	10.5	10.1	12.6	13.8	137.8	
PRECIPITATION ≥ 1.00	30	0.1	0.1	0.3	0.5	0.4	0.6	0.8	0.5	1.0	0.3	0.4	0.2	5.2	
SNOWFALL	NORMAL (IN)	30	13.2	9.4	7.7	2.6	0.*	0.0	0.0	0.0	0.0	0.3	3.5	11.6	48.3
	MAXIMUM MONTHLY (IN)	62	28.5	20.8	19.4	17.3	0.6	T	T	T	T	4.4	16.2	35.3	35.3
	YEAR OF OCCURRENCE		1976	1990	1965	1975	1961	1992	1992	1998	1975	1989	1951	2000	DEC 2000
	MAXIMUM IN 24 HOURS (IN)	62	19.8	11.3	12.6	16.7	0.5	T	T	T	T	3.5	13.4	10.8	19.8
	YEAR OF OCCURRENCE		1967	1965	1973	1975	1961	1992	1992	1998	1975	1989	1951	2000	JAN 1967
	MAXIMUM SNOW DEPTH (IN)	54	23	23	13	17	0	0	0	0	0	2	8	20	23
	YEAR OF OCCURRENCE		1967	1967	1973	1975						1997	1975	2000	FEB 1967
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	4.0	3.1	2.5	0.5	0.0	0.0	0.0	0.0	0.0	0.1	1.2	3.9	15.3	

PRECIPITATION (inches) 2003 FLINT, MI (FNT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	2.61	2.16	3.60	3.35	5.50	1.93	1.72	2.75	2.20	1.44	2.78	2.35	32.39
1975	2.89	2.01	2.78	4.31	3.70	4.68	1.92	11.04	3.48	1.37	3.17	4.03	45.38
1976	1.53	2.27	3.66	5.59	4.24	4.11	1.98	0.81	2.66	3.17	1.22	0.92	32.16
1977	0.57	0.70	2.78	3.28	0.95	4.70	1.91	3.15	4.59	2.09	2.67	1.47	28.86
1978	2.02	0.51	1.99	1.03	2.97	1.66	0.73	2.62	4.57	1.51	1.44	2.64	23.69
1979	1.78	0.34	1.58	2.33	1.58	3.96	2.96	2.53	0.32	1.90	3.64	2.30	25.22
1980	1.25	0.88	2.20	3.40	2.35	2.38	5.61	3.28	4.75	2.17	0.66	2.95	31.88
1981	0.59	1.83	0.76	4.32	3.07	2.95	3.93	3.22	7.65	3.09	1.41	1.24	34.06
1982	1.57	0.66	2.49	1.23	2.15	3.24	3.06	3.24	2.76	0.57	4.76	2.75	28.48
1983	1.01	0.91	2.40	3.63	3.76	3.94	2.24	2.26	4.06	2.62	3.46	1.85	32.14
1984	0.56	0.52	2.83	2.85	3.54	0.92	3.48	3.66	2.77	2.61	2.65	3.76	30.15
1985	2.06	3.01	4.00	3.60	2.81	1.54	2.99	4.33	8.29	3.45	3.16	1.38	40.62
1986	0.70	2.10	1.44	2.68	1.61	5.13	3.12	5.29	10.86	1.96	0.94	1.71	37.54
1987	1.16	0.42	1.45	1.80	2.28	1.60	2.20	5.03	5.57	1.90	3.29	2.54	29.24
1988	1.27	1.52	1.45	2.69	0.34	0.63	3.74	4.00	3.03	2.76	4.94	1.27	27.64
1989	1.31	0.52	2.11	1.50	3.93	4.90	2.65	5.56	4.33	1.67	2.86	1.00	32.34
1990	1.84	2.59	1.45	2.10	3.26	3.77	1.80	2.37	3.06	4.06	4.29	2.49	33.08
1991	1.49	0.68	2.87	4.07	3.23	2.91	3.78	3.33	0.63	3.52	3.01	2.15	31.67
1992	1.15	1.59	2.56	3.80	1.64	2.26	9.35	3.50	2.50	2.46	4.05	2.01	36.87
1993	2.80	1.16	1.21	4.55	1.68	5.23	2.32	3.37	4.66	2.21	1.32	0.51	31.02
1994	1.91	0.93	1.70	5.01	0.79	6.52	2.84	3.39	2.81	2.70	3.51	1.75	33.86
1995	2.08	0.72	1.24	2.76	2.23	0.72	2.64	4.29	1.05	2.60	4.22	1.15	25.70
1996	2.07	1.20	1.86	3.15	3.02	3.90	1.94	0.68	2.82	2.79	1.66	2.05	27.14
1997	0.98	3.12	2.39	1.21	3.33	1.57	2.70	2.72	4.31	1.55	1.05	0.77	25.70
1998	3.05	1.67	3.41	1.43	0.99	1.25	1.13	2.62	1.28	2.23	1.58	1.50	22.14
1999	2.89	1.19	0.75	5.06	1.81	3.89	4.13	2.49	2.11	1.39	1.13	1.97	28.81
2000	0.97	1.00	0.90	2.90	6.34	2.98	8.55	2.87	6.24	1.96	1.96	3.41	40.08
2001	1.03	3.52	0.56	3.24	5.35	3.32	1.61	1.54	3.71	6.59	3.14	1.77	35.38
2002	1.36	1.83	1.61	3.19	3.62	1.48	3.63	1.51	0.29	1.27	1.38	1.08	22.25
2003	0.26	0.60	1.71	2.94	3.35	2.16	1.73	3.79	3.16	2.00	5.66	2.34	29.70
POR= 62 YRS	1.62	1.52	2.15	3.01	3.03	3.25	3.03	3.29	3.10	2.26	2.48	1.90	30.64

WBAN : 14826

AVERAGE TEMPERATURE (°F) 2003 FLINT, MI (FNT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	24.8	20.9	34.9	48.1	53.9	64.9	71.3	69.7	58.9	48.1	40.2	29.2	47.1
1975	28.0	27.2	30.6	40.3	61.8	67.2	70.5	69.9	57.4	53.6	47.3	28.8	48.6
1976	18.1	31.1	38.7	48.2	54.5	69.4	71.1	68.2	60.6	46.8	33.3	17.4	46.5
1977	10.9	22.4	39.2	49.5	62.6	63.1	73.8	68.2	63.6	48.8	41.3	25.8	47.4
1978	18.2	13.4	26.7	43.8	58.7	65.1	69.6	70.0	65.4	50.3	40.6	26.5	45.7
1979	15.9	12.8	38.1	44.6	56.8	66.7	69.9	66.8	62.7	49.9	39.6	32.1	46.3
1980	23.4	20.3	29.9	44.6	57.7	61.6	70.5	70.5	60.5	44.3	36.2	24.4	45.3
1981	18.1	28.3	35.6	48.2	54.2	65.9	70.7	69.0	57.7	44.7	38.7	26.1	46.4
1982	16.4	20.2	32.7	43.3	65.0	62.9	71.3	66.6	61.0	52.5	41.4	37.2	47.5
1983	27.7	31.8	37.8	43.7	53.5	67.3	74.0	73.3	64.8	51.5	41.1	20.1	48.9
1984	14.4	31.2	26.8	45.3	51.5	69.3	70.0	71.8	60.7	54.0	39.4	33.4	47.3
1985	19.8	22.7	37.0	51.8	59.3	62.5	70.4	67.2	63.3	51.4	39.8	21.3	47.2
1986	21.7	21.1	35.8	49.4	58.9	64.9	72.2	66.3	63.0	50.5	35.5	29.9	47.4
1987	24.7	28.7	38.1	49.9	62.8	70.3	75.6	69.3	62.6	45.2	41.6	32.2	50.1
1988	22.0	20.1	34.1	46.5	60.3	67.7	75.2	72.6	61.2	44.8	41.4	27.3	47.8
1989	30.9	20.8	32.7	44.0	56.2	66.2	71.3	68.0	59.6	51.2	35.9	16.1	46.1
1990	31.8	26.9	38.1	48.4	55.3	66.8	70.0	69.4	61.5	49.9	42.4	29.8	49.2
1991	21.2	29.3	37.7	50.2	64.2	69.7	71.7	70.0	59.6	52.8	36.2	29.4	49.3
1992	25.8	29.4	32.9	43.6	57.3	64.2	66.9	65.2	60.2	48.1	38.3	31.5	47.0
1993	26.2	20.5	32.2	45.3	58.0	65.8	72.9	70.4	56.3	47.3	36.8	27.0	46.6
1994	13.8	18.4	33.5	47.6	55.0	67.9	70.6	65.9	62.7	51.6	42.5	32.0	46.8
1995	25.4	20.6	36.1	42.6	56.9	68.4	72.4	74.3	58.5	52.1	32.0	23.0	46.9
1996	21.9	23.7	28.1	42.4	54.8	68.5	67.6	70.1	61.6	50.1	32.7	28.8	45.9
1997	21.3	27.1	34.0	42.9	48.8	67.1	69.5	65.0	59.8	48.1	35.5	29.9	45.8
1998	29.9	34.5	36.4	47.6	62.9	66.8	70.4	70.8	65.3	51.5	41.8	32.3	50.9
1999	20.6	31.0	31.0	48.1	59.3	68.5	73.0	66.4	61.9	48.2	42.9	29.7	48.4
2000	20.6	29.3	41.4	44.9	59.4	66.8	67.5	68.4	60.1	53.5	38.6	16.6	47.3
2001	24.9	27.1	32.5	48.5	59.2	66.7	71.0	71.5	59.3	50.5	46.6	34.1	49.3
2002	30.9	30.0	32.4	47.9	53.1	69.2	75.0	70.8	66.6	47.7	37.7	27.7	49.1
2003	19.2	20.5	33.4	45.9	55.3	64.6	70.8	70.9	61.9	49.6	42.5	32.1	47.2
POR= 61 YRS	22.5	24.5	33.1	45.7	56.7	66.5	70.6	68.9	62.0	51.0	39.8	28.1	47.4

HEATING DEGREE DAYS (base 65°F) 2003 FLINT, MI (FNT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	4	10	211	519	737	1101	1142	1055	1059	736	162	56	6792
1975-76	8	2	225	355	525	1117	1448	978	809	518	322	16	6323
1976-77	1	33	169	559	943	1467	1671	1186	794	468	152	118	7561
1977-78	7	35	97	496	701	1210	1444	1438	1178	632	238	87	7563
1978-79	17	8	89	449	725	1187	1516	1458	829	606	291	64	7239
1979-80	17	36	120	477	753	1014	1282	1288	1079	607	250	154	7077
1980-81	2	8	152	633	856	1252	1445	1023	903	499	336	41	7150
1981-82	10	24	231	621	780	1199	1501	1246	996	648	83	91	7430
1982-83	3	58	163	385	700	851	1153	924	838	633	351	65	6124
1983-84	12	5	106	422	711	1385	1565	977	1178	586	411	23	7381
1984-85	14	12	176	335	761	972	1395	1177	860	418	197	103	6420
1985-86	7	28	153	413	748	1345	1338	1224	899	475	218	69	6917
1986-87	13	54	113	444	881	1081	1242	1010	826	447	174	25	6310
1987-88	11	44	119	605	695	1011	1326	1295	954	547	189	82	6878
1988-89	5	24	144	626	700	1161	1053	1233	993	626	289	49	6903
1989-90	5	28	199	422	864	1507	1020	1061	829	529	299	42	6805
1990-91	18	10	164	469	668	1084	1352	994	838	450	165	22	6234
1991-92	3	9	218	381	855	1098	1206	1024	988	638	266	78	6764
1992-93	26	56	193	516	793	1032	1194	1238	1007	583	218	71	6927
1993-94	1	16	267	544	837	1169	1581	1298	969	528	326	49	7585
1994-95	2	53	116	408	670	1017	1220	1236	889	665	249	39	6564
1995-96	14	0	217	403	982	1295	1328	1191	1137	675	340	19	7601
1996-97	26	2	150	457	965	1114	1346	1055	951	655	497	44	7262
1997-98	22	57	165	526	878	1081	1080	847	890	517	111	118	6292
1998-99	8	12	72	421	689	1006	1370	946	1046	503	203	62	6338
1999-00	4	36	135	512	659	1087	1369	1028	733	596	214	63	6436
2000-01	27	27	197	355	787	1492	1236	1055	999	487	198	75	6935
2001-02	22	3	204	446	546	950	1050	976	1004	531	383	44	6159
2002-03	0	6	74	553	814	1151	1412	1238	973	575	294	76	7166
2003-	1	5	132	470	670	1010							

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COOLING DEGREE DAYS (base 65°F) 2003 FLINT, MI (FNT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0	0	0	4	6	77	206	163	35	2	0	0	493
1975	0	0	0	0	68	128	187	158	1	9	0	0	551
1976	0	0	0	20	5	155	196	140	41	3	0	0	560
1977	0	0	0	12	86	70	286	140	62	0	0	0	656
1978	0	0	0	0	51	95	165	172	108	0	0	0	591
1979	0	0	0	0	43	118	177	97	57	17	0	0	509
1980	0	0	0	3	27	55	181	183	27	0	0	0	476
1981	0	0	0	0	10	77	196	151	19	0	0	0	453
1982	0	0	0	0	91	35	204	118	49	6	0	0	503
1983	0	0	0	0	0	142	301	268	110	11	0	0	832
1984	0	0	0	0	1	157	179	231	53	1	0	0	622
1985	0	0	0	28	29	33	179	107	108	0	0	0	484
1986	0	0	0	12	38	73	246	103	57	0	0	0	529
1987	0	0	0	1	113	189	345	185	55	0	2	0	890
1988	0	0	0	0	50	171	328	266	34	6	0	0	855
1989	0	0	0	0	19	88	207	128	46	1	0	0	489
1990	0	0	5	40	5	100	177	153	65	9	1	0	555
1991	0	0	0	11	151	171	217	173	67	10	0	0	800
1992	0	0	0	2	34	61	91	74	53	0	0	0	315
1993	0	0	0	0	9	101	251	189	12	1	0	0	563
1994	0	0	0	9	24	142	180	88	54	0	0	0	497
1995	0	0	0	0	7	147	250	293	28	8	0	0	733
1996	0	0	0	0	30	129	111	170	56	1	0	0	497
1997	0	0	0	0	0	117	166	64	17	8	0	0	372
1998	0	0	11	0	55	178	180	197	88	8	0	0	717
1999	0	0	0	2	29	174	256	85	51	0	0	0	597
2000	0	0	4	0	48	120	110	138	56	5	0	0	481
2001	0	0	0	0	22	134	215	205	40	4	0	0	620
2002	0	0	0	27	21	176	315	193	128	22	0	0	882
2003	0	0	0	9	2	68	189	193	46	1	0	0	508

SNOWFALL (inches) 2003 FLINT, MI (FNT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0.0	0.0	0.0	T	9.2	21.3	6.8	12.3	16.0	17.3	0.0	0.0	82.9
1975-76	0.0	0.0	T	0.0	10.5	21.1	28.5	7.8	5.6	3.1	T	0.0	76.6
1976-77	0.0	0.0	0.0	T	2.4	17.6	15.6	3.8	5.1	0.3	0.0	0.0	44.8
1977-78	0.0	0.0	0.0	T	3.4	9.9	23.6	8.4	5.0	0.3	0.0	0.0	50.6
1978-79	0.0	0.0	0.0	0.0	6.2	9.8	26.1	3.0	5.4	1.5	0.0	0.0	52.0
1979-80	0.0	0.0	0.0	T	9.4	2.5	6.2	7.2	10.8	3.6	0.0	0.0	39.7
1980-81	0.0	0.0	0.0	T	0.6	13.8	9.5	8.4	4.1	T	0.0	0.0	36.4
1981-82	0.0	0.0	0.0	T	2.8	11.9	19.3	10.7	9.3	8.2	0.0	0.0	62.2
1982-83	0.0	0.0	0.0	0.0	1.3	3.6	3.8	4.8	13.0	7.1	0.0	0.0	33.6
1983-84	0.0	0.0	0.0	0.0	2.4	20.0	9.0	3.6	6.5	0.5	0.0	0.0	42.0
1984-85	0.0	0.0	0.0	0.0	1.1	11.0	15.3	14.4	6.4	1.2	0.0	0.0	49.4
1985-86	0.0	0.0	0.0	0.0	3.4	13.2	11.2	20.6	4.3	0.6	0.0	0.0	53.3
1986-87	0.0	0.0	0.0	0.0	4.8	8.9	16.9	2.2	4.3	1.5	0.0	0.0	38.6
1987-88	0.0	0.0	0.0	0.5	T	8.8	5.9	19.6	4.3	0.1	0.0	0.0	0.0
1988-89	0.0	0.0	0.0	T	1.3	6.2	8.7	8.7	3.3	1.3	0.0	T	29.5
1989-90	0.0	0.0	0.0	4.4	7.8	11.3	5.6	20.8	2.9	2.6	0.0	0.0	55.4
1990-91	0.0	0.0	0.0	0.0	T	10.6	16.6	5.8	1.2	T	0.0	0.0	34.2
1991-92	0.0	0.0	0.0	T	4.9	16.7	14.0	1.4	14.4	3.0	T	T	54.4
1992-93	T	0.0	0.0	1.8	0.6	4.6	11.3	16.1	11.8	7.0	0.0	0.0	53.2
1993-94	0.0	0.0	0.0	0.8	0.8	3.5	14.7	20.1	4.2	0.2	0.3	0.0	44.6
1994-95	0.0	0.0	0.0	0.0	1.2	10.2	18.4	7.4	4.5	0.8	0.0	0.0	42.5
1995-96	0.0	0.0	0.0	T	3.5	7.1	4.9	5.4	17.7	T	0.0	0.0	38.6
1996-97	0.0	0.0	0.0	T	2.3	11.9	17.3	5.4	3.7	2.9	0.0	0.0	43.5
1997-98	0.0	0.0	0.0	2.8	3.3	6.9	8.0	0.4	6.9	0.0	0.0	0.0	28.3
1998-99	0.0	T	0.0	0.0	0.2	3.4	24.9	6.0	14.4	T	T	0.0	48.9
1999-00	0.0	0.0	0.0	0.0	T	5.1	10.4	7.2	1.9	4.9	0.0	0.0	29.5
2000-01	0.0	0.0	0.0	0.0	2.2	35.3	5.1	5.0	3.8	2.0	0.0	0.0	53.4
2001-02	0.0	0.0	0.0	T	T	8.1	15.6	8.9	4.7	3.1	T	0.0	40.4
2002-03	0.0	0.0	0.0	0.0	2.1	12.9	8.4	12.5	9.8	3.6	0.0	0.0	49.3
2003-	0.0	T	0.0	0.0	2.5	10.3							
POR= 61 YRS	T	0.0	T	0.2	3.5	9.9	11.6	9.2	7.3	2.3	0.0	T	44.0

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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 (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
FLINT,
MICHIGAN (FNT)

Flint, Michigan, is located in the Flint River Valley, in the center of Genesee County. Lake Huron lies approximately 65 miles to the east, while Saginaw Bay is about 40 miles to the north. The surrounding terrain is generally level with a slight rising tendency to a range of hills 15 to 20 miles southeast of the city.

Flint is generally under the climatic influence of the Great Lakes. Temperatures of 100 degrees or higher are rare and cold waves are less severe than expected. During the winter months, snow showers occur with strong northwesterly winds, and Lake Michigan, lying 120 miles to the west, causes a tempering effect upon cold waves coming from the northwest. The lake effect also results in delaying the coming of spring and prolonging warmer weather in late autumn. This results in conditions favorable for orchards and small fruit.

Precipitation is usually ample for growth and development of vegetation. The wettest periods normally occur in the late spring, early summer, and early fall. The driest period is normally during the winter, and although there is an occasional heavy snowfall, most of the snow occurs in the form of frequent light flurries.

Winter months are marked by considerable cloudiness and rather high relative humidity, while during the summer relative humidity is usually not excessive and sunshine is plentiful.

Violent windstorms associated with thunderstorms and squall lines occasionally hit this area. Tornadoes are infrequent but have caused extensive property damage and loss of life.

Weather changes are frequent throughout the year, since a majority of atmospheric disturbances moving eastward across the country pass near enough to affect the weather in Flint.

STATION LOCATION

FLINT, MICHIGAN

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
						SEA LEVEL		GROUND										
						GROUND	TEMPERATURE	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAIN GAUGE	WINDHOLE GAUGE	8 INCH RAIN GAUGE			
*NOTE: <u>AIRPORT</u> Weather Bureau Bldg. + Bishop Airport + National Weather Service Building (Effective 1970) Bishop Airport	03/17/57	06/01/95	0.6 mi. W	42°58'	83°45'	766 h770 i771	35 e35 f21	5 e5	5 e5				5 e5	3 e4	g4		e. Moved 250' NE 11/15/57. f. Moved 3600' ESE 9/9/63. g. Commissioned 2100' S of thermometer site 10/1/63. h. Effective 10/1/63. i. Revised 12/31/68. ASOS Commissioned 06/01/95 j. Ground elevation.	
	06/01/95	Present	NA	42°58'	83°45'	j780										S		

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* NOTES: For earlier station history see previous editions.