

2003

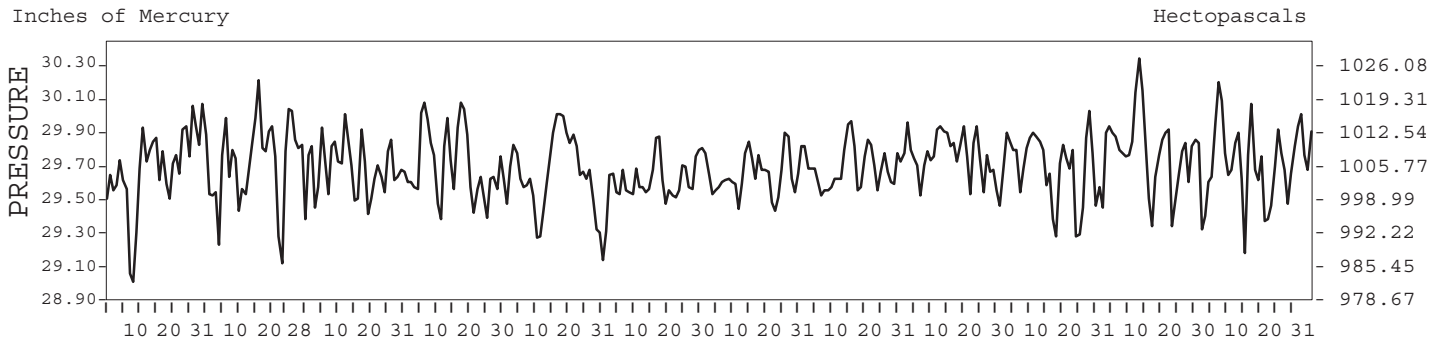
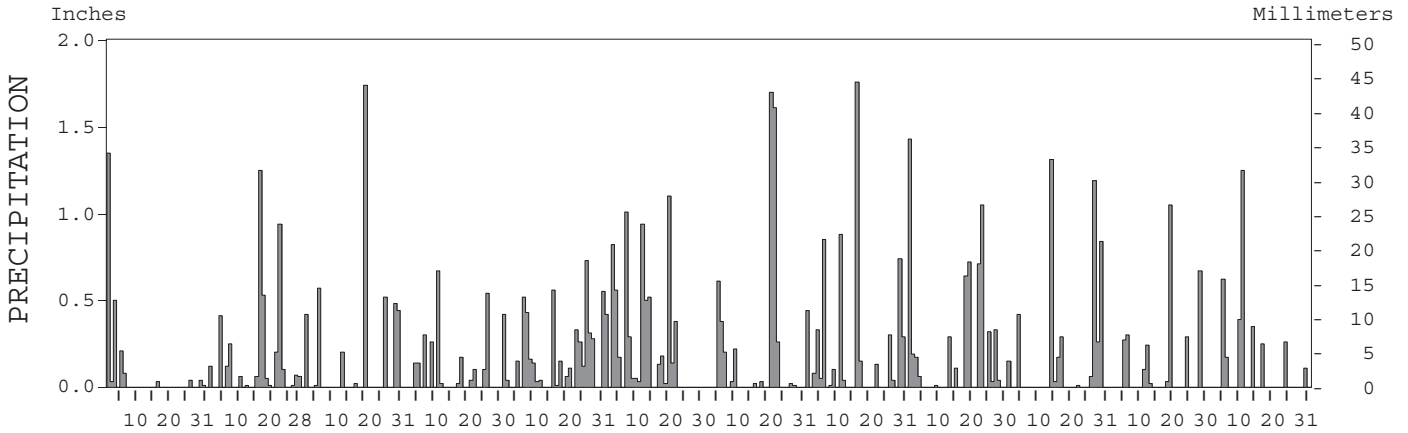
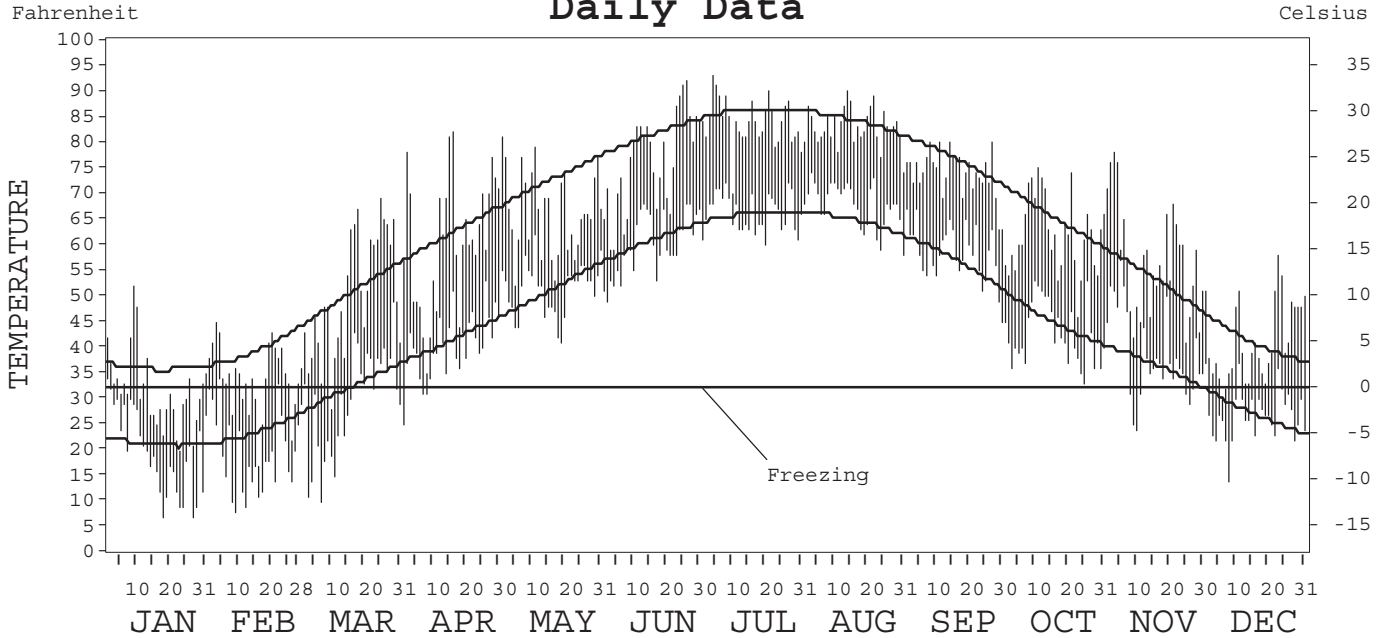
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



MIDDLETOWN/HARRISBURG INTL APT
PENNSYLVANIA (MDT)

ISSN 0198-4519

Daily Data



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Thomas R. Karl

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METEOROLOGICAL DATA FOR 2003

HARRISBURG, PA (MDT)

LATITUDE: 40° 11' 37" N LONGITUDE: 76° 45' 48" W ELEVATION (FT): GRND: 311 BARO: 314 TIME ZONE: EASTERN (UTC + 5) WBAN: 14711

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	31.6	34.0	50.0	60.8	66.4	76.3	83.9	83.0	74.0	61.9	56.8	41.3	60.0	
	HIGHEST DAILY MAXIMUM	52	45	69	82	81	97	93	90	80	75	78	58	97	
	DATE OF OCCURRENCE	09	03	25	16	01	30	04	14	27+	11	03	23	JUN 30	
	MEAN DAILY MINIMUM	19.7	19.3	29.6	40.4	51.3	60.1	66.2	67.8	58.4	42.7	38.6	27.1	43.4	
	LOWEST DAILY MINIMUM	7	8	10	25	41	49	60	58	45	33	24	14	7	
	DATE OF OCCURRENCE	27+	09	07	01	19	02	20	31	30	25	10	08	JAN 27+	
	AVERAGE DRY BULB	25.7	26.7	39.8	50.6	58.9	68.2	75.1	75.4	66.2	52.3	47.7	34.2	51.7	
	MEAN WET BULB		25.4	36.5	45.8	55.4	63.1	68.8		62.0	48.5	44.2			
	MEAN DEW POINT		21.2	32.4	40.5	52.7	59.9	65.4		59.3	44.7	39.7			
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	2	3	1	0	0	0	0	0	6
	MAXIMUM ≤ 32°	18	8	1	0	0	0	0	0	0	0	0	2	29	
	MINIMUM ≤ 32°	30	26	18	3	0	0	0	0	0	0	7	28	112	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	1213	1067	774	427	193	51	0	0	28	384	513	950	5600	
	COOLING DEGREE DAYS	0	0	0	2	10	153	319	328	70	0	0	0	882	
RH	MEAN (PERCENT)	69	79	79	72	82	79	74	81	81	78	77	72	77	
	HOUR 01 LST	72	83	83	79	89	86	84	89	90	88	84	78	84	
	HOUR 07 LST	74	84	87	82	88	84	83	89	90	89	85	80	85	
	HOUR 13 LST	61	71	69	63	74	68	60	67	65	59	66	64	66	
	HOUR 19 LST	68	77	78	66	78	78	73	81	82	81	78	70	76	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	7	8	1	0	1	1	3	2	3	3	2	31	
	THUNDERSTORMS	0	0	0	1	4	0	1	2	0	0	0	0	8	
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.)	29.68	29.70	29.67	29.69	29.63	29.60	29.64	29.68	29.74	29.68	29.74	29.72	29.68	
	MEAN SEA-LEVEL PRESS. (IN.)	30.03	30.05	30.02		29.96	29.93	29.97				30.08			
WINDS	RESULTANT SPEED (MPH)	6.7	3.8	1.3	1.2	1.2	1.4	0.7		0.7	2.3	2.7	6.2		
	RES. DIR. (TENS OF DEGS.)	30	31	32	06	12	31	29		06	30	30	31		
	MEAN SPEED (MPH)	9.4	7.6	6.5	7.6	5.9	5.3	5.2	3.5	5.4	5.3	6.8	9.2	6.5	
	PREVAIL. DIR. (TENS OF DEGS.)	30	31	31	11	12	30	31	36	31	30	30	30	30	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	32	36	35	29	26	24	32	24	48	38	44	36	48	
	DIR. (TENS OF DEGS.)	30	30	31	30	31	33	29	23	13	29	31	31	13	
	DATE OF OCCURRENCE	11	23	03	22	13+	01	05	06	19	15	13	11	SEP 19	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	39	44	41	36	36	31	41	33	60	47	56	43	60	
DIR. (TENS OF DEGS.)	30	30	31	30	29	34	30	23	12	31	31	30	12		
DATE OF OCCURRENCE	11	23+	03	22	12	01	05	06	19	15	13	11+	SEP 19		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.29	4.25	4.40	2.50	5.40	7.31	5.09	6.19	6.10	4.73	2.97	3.40	54.63	
	GREATEST 24-HOUR (IN.)	1.35	1.25	1.74	0.67	0.82	1.43	3.05	1.91	1.75	1.34	1.06	1.64	3.05	
	DATE OF OCCURRENCE	01	16	20	11	25-26	12-13	21-22	16-17	22-23	14-15	18-19	10-11	JUL 21-22	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	9	17	9	12	21	18	12	16	15	11	9	8	157	
PRECIPITATION ≥ 0.10	3	9	7	9	16	14	7	11	11	8	7	8	110		
PRECIPITATION ≥ 1.00	1	1	1	0	0	2	2	1	2	2	1	1	14		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	7.3	29.8	1.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	52.5	
	GREATEST 24-HOUR (IN.)	2.5	12.6	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	12.6	
	DATE OF OCCURRENCE	05	16	30	07								05	FEB 16	
	MAXIMUM SNOW DEPTH (IN.)	3	19	8	1	0	0	0	0	0	0	0	8	19	
	DATE OF OCCURRENCE	06+	18+	01	07								07+	FEB 18+	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3	9	1	1	0	0	0	0	0	0	0	3	17		

NORMALS, MEANS, AND EXTREMES

MIDDLETOWN/HARRISBURG, PA (MDT)

LATITUDE: 40° 11' 37" N LONGITUDE: 76° 45' 48" W ELEVATION (FT): GRND: 311 BARO: 314 TIME ZONE: EASTERN (UTC + 5) WBAN: 14711

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	37.5	40.9	50.9	62.6	72.6	80.8	85.7	83.7	75.7	64.3	52.5	41.7	62.4
	MEAN DAILY MAXIMUM	30	38.0	41.2	49.1	62.5	72.6	81.7	86.0	84.0	76.1	65.7	52.5	41.1	62.5
	HIGHEST DAILY MAXIMUM	65	73	78	87	93	97	100	107	101	102	97	84	75	107
	YEAR OF OCCURRENCE		1950	1997	1998	1985	1942	1966	1966	1944	1953	1941	1950	1998	JUL 1966
	MEAN OF EXTREME MAXS.	30	57.8	60.4	71.1	83.5	88.9	94.2	96.0	94.2	89.8	81.5	70.7	60.4	79.0
	NORMAL DAILY MINIMUM	30	23.1	24.7	32.5	41.5	51.4	60.6	66.0	64.2	56.7	44.6	36.1	27.8	44.1
	MEAN DAILY MINIMUM	30	23.7	25.3	31.7	42.2	52.0	61.5	66.5	64.3	56.8	45.0	35.5	26.7	44.3
	LOWEST DAILY MINIMUM	65	-22	-5	5	19	31	40	49	45	30	23	13	-8	-22
	YEAR OF OCCURRENCE		1994	1979	1984	1982	1966	1980	1945	1976	1963	2000	1955	1960	JAN 1994
	MEAN OF EXTREME MINS.	30	7.4	9.2	18.0	28.8	38.7	49.6	56.4	53.4	41.2	31.1	21.8	10.5	30.5
	NORMAL DRY BULB	30	28.6	31.3	41.2	51.6	61.8	70.9	75.7	74.1	66.4	54.7	44.4	33.6	52.9
	MEAN DRY BULB	30	31.0	33.2	40.5	52.4	62.3	71.7	76.3	74.1	66.5	55.2	43.9	33.8	53.4
	MEAN WET BULB	7	27.9	27.9	35.4	46.5	55.0	65.2	60.9	56.6	53.3	43.3	36.4	27.7	44.7
	MEAN DEW POINT	7	22.4	20.9	28.8	39.5	49.5	61.1	57.9	53.4	50.2	39.2	31.5	22.6	39.8
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	1.9	5.2	9.1	5.1	1.1	0.0	0.0	0.0	22.4	
MAXIMUM ≤ 32°	30	8.7	5.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.6	19.7	
MINIMUM ≤ 32°	30	25.3	22.4	16.0	2.6	0.0	0.0	0.0	0.0	0.0	0.6	11.8	23.0	101.7	
MINIMUM ≤ 0°	30	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	
H/C	NORMAL HEATING DEG. DAYS	30	1076	901	723	390	148	14	0	1	52	338	621	937	5201
	NORMAL COOLING DEG. DAYS	30	0	0	0	1	54	186	337	279	87	11	0	0	955
RH	NORMAL (PERCENT)														
	HOUR 01 LST														
	HOUR 07 LST														
	HOUR 13 LST														
	HOUR 19 LST														
S	PERCENT POSSIBLE SUNSHINE	62	48	54	57	58	59	64	67	66	61	58	47	44	57
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	60	2.3	2.4	1.9	1.0	1.0	0.6	0.6	0.8	1.5	2.7	1.8	2.5	19.1
	THUNDERSTORMS	60	0.2	0.2	1.0	2.4	4.7	5.8	6.3	4.9	2.9	0.8	0.5	0.2	29.9
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	49	5.4	5.3	5.3	5.2	5.2	4.9	4.9	4.7	4.7	4.6	5.2	5.6	5.1
	MIDNIGHT-MIDNIGHT (OKTAS)	8	5.4	5.1	5.2	5.0	4.8	5.3	4.9	4.6	4.6	3.5	4.6	5.3	4.9
	MEAN NO. DAYS WITH:														
	CLEAR	61	6.5	6.6	7.1	6.5	5.9	6.4	7.0	7.7	8.5	9.8	6.3	6.1	84.4
PARTLY CLOUDY	61	7.8	7.4	8.3	8.7	10.9	11.7	11.7	11.3	9.5	8.4	8.2	7.5	111.4	
CLOUDY	61	16.7	14.3	15.4	14.9	14.3	11.9	11.9	11.6	11.6	12.4	15.2	16.8	167.0	
PR	MEAN STATION PRESSURE (IN)	27	29.72	29.73	29.67	29.62	29.63	29.63	29.65	29.69	29.73	29.75	29.73	29.74	29.69
	MEAN SEA-LEVEL PRES. (IN)	12	30.08	30.09	30.03	29.98	29.99	29.98	29.98	30.04	30.05	30.12	30.11	30.11	30.05
WINDS	MEAN SPEED (MPH)	30	7.9	8.3	9.2	8.4	7.1	6.3	5.5	4.9	5.2	5.5	7.0	7.4	6.9
	PREVAIL. DIR (TENS OF DEGS)	16	31	31	31	31	30	30	31	30	31	31	31	30	31
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	35	39	40	38	35	31	35	31	48	38	44	38	48
	DIR. (TENS OF DEGS)		31	29	30	34	30	31	31	31	13	29	31	30	13
	YEAR OF OCCURRENCE		2002	2002	2002	2001	2002	2001	2001	2002	2003	2003	2003	2001	SEP 2003
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	3	44	51	55	48	46	39	43	40	60	47	56	44	60
DIR. (TENS OF DEGS)		29	28	30	34	30	28	31	33	12	31	31	31	12	
YEAR OF OCCURRENCE		2002	2001	2002	2001	2002	2002	2002	2002	2003	2003	2003	2001	SEP 2003	
PRECIPITATION	NORMAL (IN)	30	3.18	2.88	3.58	3.31	4.60	3.99	3.21	3.24	3.65	3.06	3.53	3.22	41.45
	MAXIMUM MONTHLY (IN)	25	8.01	5.93	6.32	7.96	9.71	8.12	8.09	6.26	9.11	6.37	6.23	7.57	9.71
	YEAR OF OCCURRENCE		1979	1981	1993	1983	1989	1982	1994	1986	1999	2002	1985	1983	MAY 1989
	MINIMUM MONTHLY (IN)	25	0.43	0.39	0.95	0.45	1.39	1.00	0.97	0.53	0.65	0.47	0.92	0.31	0.31
	YEAR OF OCCURRENCE		1981	2002	1995	1985	1999	1988	1983	1995	1986	2000	1998	1998	DEC 1998
	MAXIMUM IN 24 HOURS (IN)	23	2.09	1.84	2.63	2.06	2.91	2.32	3.84	2.78	3.46	2.78	3.27	2.58	3.84
	YEAR OF OCCURRENCE		1979	1985	2000	1992	1984	1987	1994	1991	1999	1995	1993	1993	JUL 1994
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	11.4	9.8	11.1	10.2	12.1	10.1	10.9	8.4	10.1	7.3	8.3	9.5	119.2
PRECIPITATION ≥ 1.00	30	0.6	0.0	1.1	0.9	0.6	0.8	0.9	1.1	1.3	0.9	0.8	0.8	9.8	
SNOWFALL	NORMAL (IN)	30	15.7	15.2	9.6	0.3	T	0.0	0.0	0.0	T	2.0	11.0	53.8	
	MAXIMUM MONTHLY (IN)	25	38.9	29.8	22.8	10.2	0.0	T	0.0	T	0.0	T	9.7	17.4	38.9
	YEAR OF OCCURRENCE		1996	2003	1993	1982		1993		1993		1982	1987	1995	JAN 1996
	MAXIMUM IN 24 HOURS (IN)	23	21.7	14.2	20.4	4.0	0.0	T	0.0	T	0.0	T	7.9	9.1	21.7
	YEAR OF OCCURRENCE		1996	1979	1993	1996		1993		1993		1979	1987	1990	JAN 1996
	MAXIMUM SNOW DEPTH (IN)	30	20	23	20	1	0	0	0	0	0	0	12	13	23
	YEAR OF OCCURRENCE		1961	1961	1993	1959							1953	1951	FEB 1961
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	3.0	4.2	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.7	12.8	

PRECIPITATION (inches) 2003 MIDDLETOWN/HARRISBURG INTL APT PA (MDT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	3.82	1.36	4.64	3.21	4.38	3.69	2.79	4.13	6.79	1.25	2.30	4.59	42.95
1975	4.12	3.10	3.78	2.80	5.25	6.51	3.13	1.83	14.97	2.62	2.92	3.19	54.22
1976	4.34	1.88	3.43	1.63	5.42	2.42	5.50	3.28	4.79	9.87	0.79	1.96	45.31
1977	1.44	1.75	6.10	4.48	1.00	3.17	3.01	0.93	3.73	3.66	5.61	4.82	39.70
1978	7.44	1.35	3.94	1.97	5.67	5.16	4.35	3.60	1.64	2.51	2.13	3.95	43.71
1979	8.01	4.74	1.93	3.60	4.66	2.62	3.14	3.24	6.62	3.91	2.67	1.46	46.60
1980	0.90	0.82	5.47	4.27	4.58	2.50	1.59	1.51	1.06	2.94	3.65	0.77	30.06
1981	0.43	5.93	1.02	2.77	1.86	4.66	4.67	4.11	2.20	3.76	0.96	2.41	34.78
1982	3.63	1.92	2.20	4.17	4.89	8.12	2.90	2.47	2.87	1.82	3.37	1.56	39.92
1983	2.26	3.38	4.86	7.96	5.36	2.81	0.97	2.50	1.40	4.21	5.29	7.57	48.57
1984	1.12	4.51	5.36	4.46	6.20	6.36	3.76	2.75	1.49	1.98	3.78	2.28	44.05
1985	1.06	2.91	2.78	0.45	6.29	3.07	2.50	2.14	3.76	1.34	6.23	1.28	33.81
1986	2.24	4.50	3.16	4.10	2.29	1.48	5.17	6.26	0.65	2.59	4.58	4.90	41.92
1987	3.69	1.59	1.43	2.93	3.73	3.46	1.96	2.89	8.41	2.63	4.96	1.84	39.52
1988	2.18	3.28	1.98	2.65	5.79	1.00	4.40	2.67	2.42	1.81	3.67	0.90	32.75
1989	2.29	1.90	3.60	1.10	9.71	6.02	7.20	3.03	2.63	5.59	2.17	1.27	46.51
1990	3.77	2.73	1.76	2.60	7.20	1.10	3.62	6.14	1.65	4.92	2.58	6.05	44.12
1991	2.61	1.39	3.54	2.00	3.15	1.08	1.99	5.29	1.35	3.15	2.08	3.49	31.12
1992	1.62	1.56	5.13	2.62	3.17	1.90	3.54	1.45	5.65	1.64	4.82	2.42	35.52
1993	2.39	2.32	6.32	6.49	1.96	3.20	3.65	3.45	7.84	2.66	4.17	3.95	48.40
1994	5.00	3.24	6.22	2.96	2.73	1.81	8.09	4.94	2.33	0.74	5.18	2.92	46.16
1995	3.52	1.52	0.95	2.22	3.52	4.16	5.81	0.53	1.95	5.43	3.67	2.53	35.81
1996	5.87	1.60	3.26	4.69	3.93	6.33	7.06	2.22	3.35	4.26	3.88	5.98	52.43
1997	2.00	1.47	3.44	0.92	3.66	2.41	4.82	3.60	2.52	1.50	3.97	2.01	32.32
1998	4.49	5.05	4.36	5.17	6.37	5.82	4.86	3.88	1.81	2.92	0.92	0.31	45.96
1999	4.94	1.90	2.55	2.80	1.39	1.87	2.96	3.92	9.11	2.65	1.66	2.57	38.32
2000	2.01	2.33	6.06	2.63	4.03	4.09	2.32	4.14	8.61	0.47	1.55	3.99	42.23
2001	2.44	1.48	4.19	1.72	1.66	2.01	1.90	3.79	2.18	1.01	1.51	1.87	25.76
2002	2.45	0.39	5.05	3.79	4.40	2.38	1.27	2.69	3.68	6.37	3.77	4.60	40.84
2003	2.29	4.25	4.40	2.50	5.40	7.31	5.09	6.19	6.10	4.73	2.97	3.40	54.63
POR= 114 YRS	2.87	2.66	3.34	3.08	3.79	3.61	3.62	3.64	3.22	2.93	2.79	2.94	38.49

WBAN : 14711

AVERAGE TEMPERATURE (°F) 2003 MIDDLETOWN/HARRISBURG INTL APT PA (MDT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	34.8	32.3	42.8	56.2	63.0	70.5	77.6	77.1	64.5	51.6	44.9	35.4	54.2
1975	33.3	32.4	38.3	47.4	64.8	70.7	75.3	76.2	63.3	57.7	50.0	34.2	53.6
1976	27.6	39.6	44.2	54.5	59.4	73.4	72.3	72.4	64.8	51.5	39.6	30.0	52.4
1977	20.1	30.4	46.0	54.1	64.5	68.6	75.9	74.3	68.3	52.7	46.1	31.6	52.7
1978	26.2	22.8	38.6	51.0	61.5	69.5	73.1	76.9	67.6	54.4	46.7	36.5	52.1
1979	29.2	22.6	45.1	50.4	62.2	68.5	73.4	72.9	65.5	52.3	46.8	37.6	52.2
1980	30.3	29.1	38.9	52.8	63.3	67.8	76.3	76.1	67.7	51.5	39.4	29.6	51.9
1981	23.7	34.6	38.7	53.7	61.9	71.7	75.7	72.2	63.9	50.7	44.7	31.9	52.0
1982	22.8	30.9	38.6	47.6	62.2	65.1	74.4	70.5	65.3	55.1	47.6	41.4	51.8
1983	33.0	33.4	42.7	49.3	58.4	69.1	75.9	74.9	66.2	53.6	43.9	28.7	52.4
1984	24.8	36.6	33.7	48.0	58.2	72.9	74.3	75.8	64.4	61.5	43.9	41.5	53.0
1985	27.9	34.4	44.5	56.9	65.2	69.4	75.9	74.1	69.2	57.2	47.9	31.0	54.5
1986	31.4	30.0	43.5	53.5	65.6	71.4	76.3	72.0	66.2	56.0	41.2	36.1	53.6
1987	30.0	32.3	44.1	52.3	63.2	72.6	78.2	73.1	65.7	49.4	43.9	36.6	53.5
1988	24.4	31.8	42.4	50.0	62.3	70.8	78.8	76.2	63.5	49.5	43.7	33.3	52.2
1989	34.8	32.4	40.4	50.4	60.0	70.6	73.7	72.6	66.0	55.6	42.7	22.6	51.8
1990	38.2	38.2	44.9	53.1	59.4	71.2	75.2	72.7	65.0	58.2	46.9	38.4	55.1
1991	31.7	37.4	43.7	53.7	69.1	74.2	78.7	76.2	65.4	56.9	43.7	36.5	55.6
1992	33.0	35.7	40.3	51.8	60.2	69.3	75.0	71.6	65.5	51.3	44.3	35.3	52.8
1993	34.8	28.8	36.6	51.3	64.6	72.1	78.0	75.9	65.6	52.8	43.9	34.0	53.2
1994	20.3	26.7	38.1	56.8	59.8	76.2	78.7	71.6	65.9	53.8	49.0	38.5	53.0
1995	34.8	29.1	44.7	50.9	61.9	71.6	77.9	77.4	66.9	59.0	39.6	29.6	53.6
1996	26.2	31.8	37.7	52.5	60.0	73.2	74.1	74.0	67.2	54.9	39.6	37.3	52.4
1997	29.8	38.3	42.5	51.1	59.6	71.4	77.4	74.0	67.1	56.2	41.6	36.0	53.8
1998	38.2	40.4	44.5	54.6	66.8	70.8	75.3	75.1	70.6	55.9	45.9	40.7	56.6
1999	30.7	36.5	41.2	53.9	65.0	73.2	81.9	75.2	68.3	54.0	49.3	37.4	55.6
2000	30.2	34.7	47.5	52.4	65.1	72.2	73.2	73.7	65.3	55.6	43.5	26.5	53.3
2001	28.4	34.8	38.1	51.5	62.4	72.6	73.2	76.8	65.1	55.7	48.8	39.8	53.9
2002	35.7	37.4	42.2	54.8	59.9	72.1	78.2	77.8	68.9	52.9	42.7	31.0	54.5
2003	25.7	26.7	39.8	50.6	58.9	68.2	75.1	75.4	66.2	52.3	47.7	34.2	51.7
POR= 115 YRS	30.3	31.6	40.4	50.7	62.1	70.8	75.4	73.4	66.4	55.0	43.8	33.3	52.8

HEATING DEGREE DAYS (base 65°F) 2003 MIDDLETOWN/HARRISBURG INTL APT PA (MDT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0	0	94	414	600	911	977	903	818	520	97	13	5347
1975-76	0	0	87	232	445	951	1150	730	639	354	193	23	4804
1976-77	0	5	75	418	756	1075	1387	966	588	340	106	32	5748
1977-78	0	5	35	377	562	1029	1196	1175	810	414	173	17	5793
1978-79	14	0	48	321	544	876	1104	1182	611	435	123	26	5284
1979-80	12	14	71	393	536	844	1070	1033	799	361	103	48	5284
1980-81	0	0	57	411	761	1091	1277	844	809	339	147	6	5742
1981-82	0	1	94	437	599	1021	1304	948	812	518	128	61	5923
1982-83	7	12	67	318	520	725	985	876	686	468	221	25	4910
1983-84	0	2	103	362	628	1117	1238	817	962	502	240	11	5982
1984-85	0	0	105	131	627	724	1143	849	627	292	87	16	4601
1985-86	0	0	41	237	508	1049	1038	974	664	349	89	9	4958
1986-87	2	17	46	300	705	890	1080	907	643	380	142	2	5114
1987-88	0	8	51	477	627	873	1252	961	693	445	131	41	5559
1988-89	4	5	88	475	633	975	931	912	760	433	196	9	5421
1989-90	1	6	81	292	663	1306	824	744	629	385	175	13	5119
1990-91	5	8	96	248	535	816	1026	769	651	345	69	2	4570
1991-92	0	0	103	279	634	877	986	842	761	392	170	16	5060
1992-93	0	3	86	420	615	914	931	1005	875	405	67	15	5336
1993-94	0	2	99	371	628	954	1382	1067	828	260	195	2	5788
1994-95	0	3	41	340	475	815	928	999	623	420	126	3	4773
1995-96	0	0	64	218	755	1090	1196	960	840	376	208	3	5710
1996-97	0	0	54	307	756	852	1083	741	688	410	175	32	5098
1997-98	1	1	46	318	696	892	824	680	653	305	67	29	5127
1998-99	0	1	24	278	565	748	1059	792	733	329	61	6	4596
1999-00	0	0	36	334	464	850	1075	872	534	375	101	16	4657
2000-01	0	4	99	293	638	1187	1127	836	826	402	112	16	5540
2001-02	1	0	82	288	477	774	900	766	699	343	189	5	4524
2002-03	0	1	22	395	663	1047	1213	1067	774	427	193	51	5853
2003-	0	0	28	384	513	950							

WBAN : 14711

COOLING DEGREE DAYS (base 65°F) 2003 MIDDLETOWN/HARRISBURG INTL APT PA (MD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0	0	0	34	79	176	401	381	88	1	3	0	1163
1975	0	0	0	0	97	192	325	354	44	12	2	0	1026
1976	0	0	0	47	22	283	233	240	73	3	0	0	901
1977	0	0	4	19	95	147	347	297	140	1	3	0	1053
1978	0	0	0	0	69	162	273	377	133	1	0	0	1015
1979	0	0	0	5	43	138	279	264	92	7	0	0	828
1980	0	0	0	0	57	138	355	350	145	0	0	0	1045
1981	0	0	0	6	60	213	339	232	66	0	0	0	916
1982	0	0	0	2	48	70	307	191	83	19	4	0	724
1983	0	0	0	6	22	154	343	315	146	13	0	0	999
1984	0	0	0	0	34	256	292	342	95	35	0	1	1055
1985	0	0	0	55	99	157	345	290	173	4	0	0	1123
1986	0	0	5	12	116	205	360	238	88	27	0	0	1051
1987	0	0	0	9	94	237	418	266	76	0	0	0	1100
1988	0	0	0	0	53	219	439	355	52	4	0	0	1122
1989	0	0	5	0	49	182	279	249	114	9	1	0	888
1990	0	0	14	34	12	205	330	254	102	43	0	0	994
1991	0	0	0	16	202	284	429	355	118	31	0	0	1435
1992	0	0	0	1	29	151	314	214	108	0	0	0	817
1993	0	0	0	0	63	236	410	348	127	0	0	0	1184
1994	0	0	0	20	40	343	428	213	76	0	1	0	1121
1995	0	0	0	6	41	208	409	392	124	36	0	0	1216
1996	0	0	0	9	61	253	286	288	126	1	0	0	1024
1997	0	0	0	0	14	230	392	283	117	50	0	0	1086
1998	0	0	24	1	130	209	326	323	199	0	0	0	1212
1999	0	0	0	0	72	260	530	323	142	1	0	0	1328
2000	0	0	0	5	110	235	262	280	115	8	0	0	1015
2001	0	0	0	5	39	250	260	371	94	8	0	0	1027
2002	0	0	0	45	38	227	417	402	145	26	0	0	1300
2003	0	0	0	2	10	153	319	328	70	0	0	0	882

SNOWFALL (inches) 2003 MIDDLETOWN/HARRISBURG INTL APT PA (MDT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0.0	0.0	0.0	0.0	T	0.5	11.3	13.1	6.1	T	0.0	0.0	31.0
1975-76	0.0	0.0	0.0	0.0	T	2.2	3.6	2.5	10.0	0.0	0.0	0.0	18.3
1976-77	0.0	0.0	0.0	0.0	1.4	5.1	12.2	4.5	0.2	T	T	0.0	23.4
1977-78	0.0	0.0	0.0	T	1.5	5.5	33.5	21.1	9.0	0.0	0.0	0.0	70.6
1978-79	0.0	0.0	0.0	0.0	4.0	0.3	9.2	26.0	T	T	0.0	0.0	39.5
1979-80	0.0	0.0	0.0	T	T	0.2	3.8	2.7	7.9	0.0	0.0	0.0	14.6
1980-81	0.0	0.0	0.0	0.0	4.0	4.3	5.5	4.4	6.7	0.0	0.0	0.0	24.9
1981-82	0.0	0.0	0.0	0.0	0.8	12.5	18.8	8.4	7.8	10.2	0.0	0.0	58.5
1982-83	0.0	0.0	0.0	T	T	1.1	4.4	28.8	0.4	1.3	0.0	0.0	36.0
1983-84	0.0	0.0	0.0	0.0	T	4.6	9.7	2.3	14.9	T	0.0	0.0	31.5
1984-85	0.0	0.0	0.0	0.0	1.9	2.6	10.6	11.4	T	3.6	0.0	0.0	30.1
1985-86	0.0	0.0	0.0	0.0	T	5.6	7.8	23.1	T	T	0.0	0.0	36.5
1986-87	0.0	0.0	0.0	0.0	T	1.9	31.5	10.1	1.4	1.0	0.0	0.0	45.9
1987-88	0.0	0.0	0.0	0.0	9.7	3.6	9.6	2.8	1.0	T	0.0	0.0	26.7
1988-89	0.0	0.0	0.0	0.0	T	T	6.4	2.2	11.3	0.0	0.0	0.0	19.9
1989-90	0.0	0.0	0.0	0.0	1.8	6.7	4.9	1.3	3.5	1.1	0.0	0.0	19.3
1990-91	0.0	0.0	0.0	0.0	0.0	9.3	5.2	0.7	5.9	T	0.0	0.0	21.1
1991-92	0.0	0.0	0.0	0.0	0.0	T	1.7	4.6	6.6	0.0	0.0	T	12.9
1992-93	0.0	0.0	0.0	0.0	T	3.9	1.4	18.5	22.8	0.6	0.0	T	47.2
1993-94	0.0	T	0.0	0.0	T	0.9	34.2	22.0	18.8	0.0	0.0	0.0	75.9
1994-95	0.0	0.0	0.0	0.0	0.5	0.5	0.6	5.6	1.8	0.0	0.0	0.0	9.0
1995-96	0.0	0.0	0.0	0.0	8.1	17.4	38.9	6.3	2.3	4.6	0.0	0.0	22.8
1996-97	0.0	0.0	0.0	0.0	0.2	6.1	3.7	6.9	5.9	0.0	0.0	0.0	11.4
1997-98	0.0	0.0	0.0	0.0	0.3	4.8	5.3	0.4	0.6	0.0	0.0	0.0	20.1
1998-99	0.0	0.0	0.0	0.0	0.0	0.8	7.4	1.3	10.6	0.0	0.0	0.0	22.9
1999-00	0.0	0.0	0.0	0.0	T	0.1	15.0	7.2	0.0	0.6	0.0	0.0	28.0
2000-01	0.0	0.0	0.0	0.0	T	5.6	9.4	9.5	3.5	T	0.0	0.0	10.6
2001-02	0.0	0.0	0.0	0.0	0.0	T	8.8	0.3	1.5	0.0	0.0	0.0	57.7
2002-03	0.0	0.0	0.0	0.0	1.0	15.8	7.3	29.8	1.8	2.0	0.0	0.0	
2003-	0.0	0.0	0.0	0.0	0.0	11.6							
POR= 63 YRS	0.0	T	0.0	0.0	2.0	6.7	9.9	9.1	6.1	0.6	T	T	34.4

WBAN : 14711

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
MIDDLETOWN/HARRISBURG INTL APT
PENNSYLVANIA (MDT)

Harrisburg, the capital of Pennsylvania, is situated on the east bank of the Susquehanna River. It is in the Great Valley formed by the eastern foothills of the Appalachian Chain, and about 60 miles southeast of the Commonwealths geographic center. It is nested in a saucer-like bowl, 10 miles south of Blue Mountain, which serves as a barrier to provide a modifying influence upon the severe winter climate experienced 50 to 100 miles to the north and west. Although the severity of the winter climate is lessened, the city lies a little too far inland to derive the full benefits of the coastal Climate.

Air masses change with some regularity, and any one condition does not persist for many days in succession. The mountain barrier occasionally prevents cold waves from reaching the Great Valley. The city is favorably located to receive precipitation produced when warm, maritime air from the Atlantic Ocean is forced upslope to cross the Blue Ridge Mountains.

The Growing Season is 192 days.

During June 1992, Hurricane Agnes produced 15.11 inches of rain from the 20th to the 23rd. Prolonged dry spells occur occasionally. During September and October 1947 there were 35 consecutive days with less than .01 inches of precipitation.

Flood stage on the Susquehanna River occurs on the average of about every three years in Harrisburg, but serious flooding is much less frequent. About one-third of all floods have occurred during March. Tropical hurricanes rarely reach Harrisburg with destructive winds.

STATION LOCATION

MIDDLETOWN/HARRISBURG INTL
APT PENNSYLVANIA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
						GROUND											
						SEA LEVEL	GROUND	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAIN GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE		
AIRPORT																	
Harrisburg International Airport	10/1/91	12/01/00		40°12'	76°46'	310	10		5	33	30	30	30			Station established 10/1/92. Sunshine switch, tipping bucket, weighing rain gauge, 8" rain gauge are all on the roof.	
Harrisburg International Airport	12/01/00	Present		40°11'	76°45'	a311								s		ASOS Commissioned 12/01/2000 a. Ground elevation.	

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