

2004

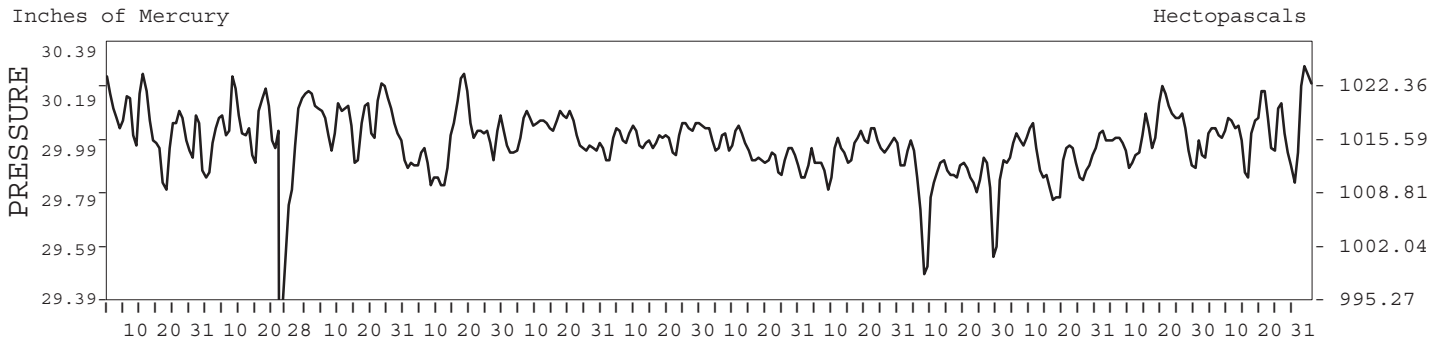
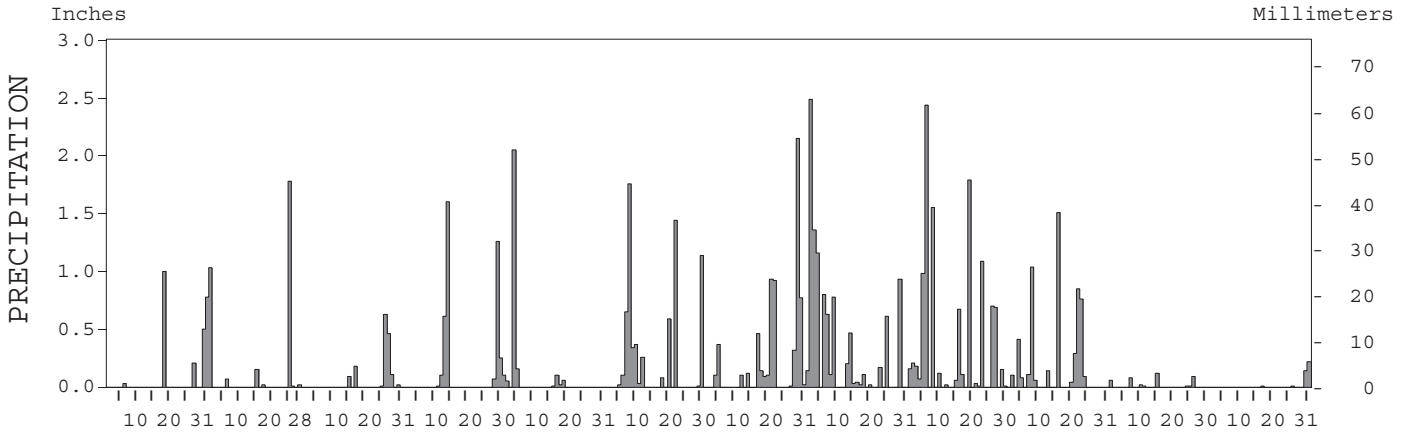
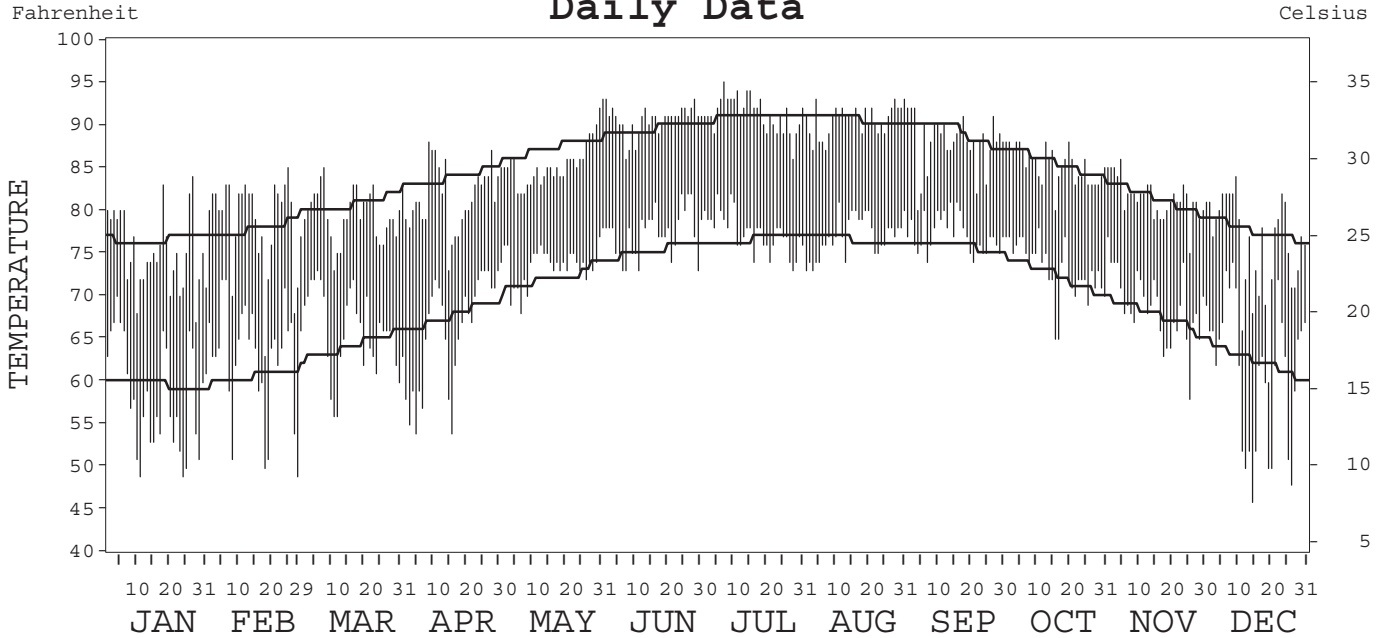
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-1269

MIAMI, FLORIDA (MIA)

Daily Data



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE
 NATIONAL CLIMATIC DATA CENTER
 ASHEVILLE, NORTH CAROLINA
 DIRECTOR NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2004

MIAMI, FL (MIA)

LATITUDE: 25° 49' 26" N LONGITUDE: 80° 17' 59" W ELEVATION (FT): GRND: 26 BARO: 29 TIME ZONE: EASTERN (UTC + 5) WBAN: 12839

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	75.2	78.7	79.6	81.7	85.6	90.6	91.3	90.6	88.0	85.3	81.5	76.0	83.7	
	HIGHEST DAILY MAXIMUM	84	85	85	88	93	93	95	93	92	88	86	84	95	
	DATE OF OCCURRENCE	27	25	07	08	31	28+	07	31+	03+	20+	05	10	JUL 07	
	MEAN DAILY MINIMUM	58.3	62.8	65.9	66.1	73.6	77.3	77.4	77.0	77.2	73.1	68.7	61.4	69.9	
	LOWEST DAILY MINIMUM	49	49	56	54	68	73	73	73	74	65	58	46	46	
	DATE OF OCCURRENCE	24+	28	11+	15+	06	29+	28	03+	21+	17+	26	15	DEC 15	
	AVERAGE DRY BULB	66.8	70.8	72.8	73.9	79.6	84.0	84.4	83.8	82.6	79.2	75.1	68.7	76.8	
	MEAN WET BULB	61.4		66.1	66.0	70.9	76.3	76.7	77.2	76.6	72.6	68.4	63.8		
	MEAN DEW POINT	57.5		62.1	61.3	66.7	73.3	73.8	74.8	74.4	69.4	64.8	60.4		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	3	25	24	22	10	0	0	0	0	84
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	34	24	0	0	0	0	0	0	0	0	0	41	99	
	COOLING DEGREE DAYS	98	197	247	274	464	575	608	589	531	449	311	165	4508	
RH	MEAN (PERCENT)	75	76	72	68	67	72	74	77	79	74	72	77	74	
	HOUR 01 LST	81	84	79	77	75	79	82	85	85	81	79	85	81	
	HOUR 07 LST	88	88	82	78	72	77	81	83	84	83	82	86	82	
	HOUR 13 LST	61	64	58	55	55	59	60	66	68	61	62	62	61	
	HOUR 19 LST	70	75	71	65	68	71	74	77	80	74	73	74	73	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	1	0	1	0	0	0	0	0	0	0	0	2	
	THUNDERSTORMS	1	1	0	3	1	10	13	13	7	4	0	0	53	
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.)	30.08		30.12	30.02	30.06	30.05	29.98	29.99	29.85	29.97	30.05	30.09		
	MEAN SEA-LEVEL PRESS. (IN.)	30.11		30.15	30.05	30.09	30.08	30.01	30.02	29.88	30.00	30.08	30.12		
WINDS	RESULTANT SPEED (MPH)	1.2		6.3	4.8	5.0	2.7	1.5	1.5	0.7	0.6	4.4	2.0		
	RES. DIR. (TENS OF DEGS.)	03		06	08	01	11	10	08	26	03	08	04		
	MEAN SPEED (MPH)	7.2	8.2	11.2	9.8	11.8	7.6	6.2	6.1	10.8	8.2	8.7	8.3	8.7	
	PREVAIL. DIR. (TENS OF DEGS.)	34	10	09	11	09	12	12	12	08	08	09	33	09	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	26	28	28	25	29	30	30	36	29	25	28	36	
	DIR. (TENS OF DEGS.)	26	19	08	29	10	21	20	16	27	08	05	27	27	
	DATE OF OCCURRENCE	18	25+	25	12	16	06	19	13	04	07	15+	26	SEP 04	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	40	35	35	33	30	38	40	39	51	37	33	36	51	
DIR. (TENS OF DEGS.)	26	29	08	27	09	24	21	15	28	06	05	27	28		
DATE OF OCCURRENCE	18	25	25	12	16	06	19	13	04	07	10	26	SEP 04		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.52	3.08	1.50	4.00	2.45	6.79	6.74	10.09	10.88	5.54	0.34	0.51	54.44	
	GREATEST 24-HOUR (IN.)	1.07	1.79	0.85	1.75	2.19	1.81	2.64	3.43	2.54	1.56	0.12	0.32	3.43	
	DATE OF OCCURRENCE	30-31	25-26	25-26	12-13	03-04	06-07	28-29	01-02	04-05	21-22	14	29-30	AUG 01-02	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	5	7	7	8	7	13	16	18	19	14	7	5	126	
PRECIPITATION ≥ 0.10	4	3	4	6	3	9	13	14	13	9	1	3	82		
PRECIPITATION ≥ 1.00	1	2	0	2	1	3	1	3	4	2	0	0	19		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

MIAMI, FL (MIA)

LATITUDE: 25° 49' 26" N LONGITUDE: 80° 17' 59" W ELEVATION (FT): GRND: 26 BARO: 29 TIME ZONE: EASTERN (UTC + 5) WBAN: 12839

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	76.5	77.7	80.7	83.8	87.2	89.5	90.9	90.6	89.0	85.4	81.2	77.5	84.2
	MEAN DAILY MAXIMUM	57	75.5	77.1	79.8	82.7	85.7	88.1	89.3	89.7	88.2	84.9	80.4	76.9	83.2
	HIGHEST DAILY MAXIMUM	62	88	89	93	96	96	98	98	98	97	95	91	87	98
	YEAR OF OCCURRENCE		1987	1994	2003	1971	1995	1985	1998	1990	1987	1980	2002	1989	JUL 1998
	MEAN OF EXTREME MAXS.	57	83.5	85.3	87.5	89.9	91.2	92.9	93.4	93.7	92.2	89.7	86.1	83.6	89.1
	NORMAL DAILY MINIMUM	30	59.6	60.5	64.0	67.6	72.0	75.2	76.5	76.5	75.7	72.2	67.5	62.2	69.1
	MEAN DAILY MINIMUM	57	59.5	60.8	64.5	67.9	72.1	74.9	76.2	76.5	75.7	72.2	66.5	61.5	69.0
	LOWEST DAILY MINIMUM	62	30	32	32	46	53	60	69	68	68	51	39	30	30
	YEAR OF OCCURRENCE		1985	1947	1980	1971	1945	1984	2002	1950	1983	1943	1950	1989	DEC 1989
	MEAN OF EXTREME MINS.	57	42.1	45.7	49.0	56.6	64.2	70.0	71.9	72.3	71.8	63.2	52.7	45.0	58.7
	NORMAL DRY BULB	30	68.1	69.1	72.4	75.7	79.6	82.4	83.7	83.6	82.4	78.8	74.4	69.9	76.7
	MEAN DRY BULB	57	67.4	69.0	72.2	75.3	78.8	81.5	82.8	83.1	82.0	78.5	73.5	69.3	76.1
	MEAN WET BULB	20	62.4	64.1	65.7	67.5	71.8	75.5	76.5	76.6	76.2	72.9	69.1	64.4	70.2
	MEAN DEW POINT	20	58.5	59.9	61.4	62.9	67.9	72.6	73.6	74.0	73.7	69.8	65.6	60.6	66.7
	NORMAL NO. DAYS WITH: MAXIMUM ≥ 90°	30	0.0	0.0	0.3	1.7	4.8	10.8	18.0	16.9	10.8	2.6	0.0	0.0	65.9
	MAXIMUM ≤ 32°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MINIMUM ≤ 32°	30	0.1	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
MINIMUM ≤ 0°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
H/C	NORMAL HEATING DEG. DAYS	30	52	39	15	1	0	0	0	0	0	0	4	38	149
	NORMAL COOLING DEG. DAYS	30	133	154	236	315	442	510	568	568	517	433	291	194	4361
RH	NORMAL (PERCENT)	30	73	71	70	67	71	76	74	76	78	75	74	73	73
	HOUR 01 LST	30	81	80	78	76	79	83	82	83	84	82	81	80	81
	HOUR 07 LST	30	84	84	82	79	80	83	83	85	87	85	84	84	83
	HOUR 13 LST	30	59	57	56	54	58	64	63	65	66	62	62	60	60
	HOUR 19 LST	30	70	68	66	64	69	74	72	75	77	73	72	71	71
S	PERCENT POSSIBLE SUNSHINE	20	66	68	74	76	72	68	72	71	70	70	67	63	70
W/O	MEAN NO. DAYS WITH: HEAVY FOG (VISBY ≤ 1/4 MI)	56	1.3	0.8	0.6	0.6	0.3	0.0	0.1	0.1	0.1	0.2	0.8	0.8	5.7
	THUNDERSTORMS	55	0.9	1.3	1.9	2.7	6.3	12.3	14.7	15.5	11.4	4.4	1.3	0.7	73.4
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	48	4.3	4.2	4.3	4.2	4.6	5.4	5.1	5.1	5.3	4.6	4.3	4.2	4.6
	MIDNIGHT-MIDNIGHT (OKTAS)	32	3.8	3.8	3.8	3.5	4.1	4.9	4.4	4.4	4.7	4.0	3.8	3.6	4.1
	MEAN NO. DAYS WITH: CLEAR	47	9.2	8.6	8.5	8.4	6.3	3.1	2.6	2.5	2.1	6.6	7.5	8.9	74.3
	PARTLY CLOUDY	47	13.1	12.1	14.1	14.9	15.3	14.3	17.4	17.8	15.5	14.3	14.0	12.9	175.7
	CLOUDY	47	8.7	7.6	8.3	6.7	9.3	12.6	11.0	10.7	12.4	10.1	8.5	9.1	115.0
PR	MEAN STATION PRESSURE (IN)	32	30.10	30.07	30.05	30.02	29.99	30.01	30.06	30.02	29.98	29.98	30.04	30.09	30.03
	MEAN SEA-LEVEL PRES. (IN)	20	30.10	30.09	30.05	30.03	30.00	30.01	30.07	30.03	29.98	29.99	30.05	30.10	30.04
WINDS	MEAN SPEED (MPH)	52	9.5	10.0	10.5	10.6	9.4	8.2	8.1	7.9	8.3	9.2	9.6	9.2	9.2
	PREVAIL. DIR (TENS OF DEGS)	36	34	11	13	10	09	11	11	10	10	06	09	34	10
	MAXIMUM 2-MINUTE: SPEED (MPH)	8	30	55	43	28	43	32	36	34	43	59	36	29	59
	DIR. (TENS OF DEGS)		09	19	26	29	10	03	31	10	10	09	18	22	09
	YEAR OF OCCURRENCE		1998	1998	2003	2004	1999	1998	1997	1998	1998	1999	1998	1997	OCT 1999
	MAXIMUM 5-SECOND: SPEED (MPH)	8	40	104	51	37	63	41	47	44	51	70	44	40	104
	DIR. (TENS OF DEGS)		26	19	26	35	33	02	23	11	28	09	31	23	19
	YEAR OF OCCURRENCE		2004	1998	2003	1999	1998	1998	1997	1998	2004	1999	1998	1997	FEB 1998
PRECIPITATION	NORMAL (IN)	30	1.88	2.07	2.56	3.36	5.52	8.54	5.79	8.63	8.38	6.19	3.43	2.18	58.53
	MAXIMUM MONTHLY (IN)	62	6.66	8.07	10.57	17.29	18.54	22.36	13.51	16.88	24.40	21.64	13.84	6.39	24.40
	YEAR OF OCCURRENCE		1969	1983	1986	1979	1968	1968	1947	1943	1960	1991	1992	1958	SEP 1960
	MINIMUM MONTHLY (IN)	62	0.04	0.01	0.02	0.05	0.44	1.81	1.77	1.65	2.63	0.72	0.09	0.12	0.01
	YEAR OF OCCURRENCE		1951	1944	1956	1981	1965	1945	1963	1954	1951	2002	1970	1988	FEB 1944
	MAXIMUM IN 24 HOURS (IN)	62	2.68	5.73	7.07	16.21	11.59	8.20	4.67	6.92	7.58	12.66	8.01	5.26	16.21
	YEAR OF OCCURRENCE		1973	1966	1949	1979	1977	1977	2003	1964	1960	2000	1992	2000	APR 1979
	NORMAL NO. DAYS WITH: PRECIPITATION ≥ 0.01	30	7.5	6.8	6.2	6.1	10.3	15.6	16.0	18.9	17.4	13.4	9.0	7.3	134.5
PRECIPITATION ≥ 1.00	30	0.4	0.5	0.8	0.9	1.4	2.7	1.6	2.5	2.7	1.7	0.9	0.5	16.6	
SNOWFALL	NORMAL (IN)	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MAXIMUM MONTHLY (IN)	5	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
	YEAR OF OCCURRENCE						1998								MAY 1998
	MAXIMUM IN 24 HOURS (IN)	59	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
	YEAR OF OCCURRENCE						1998								MAY 1998
	MAXIMUM SNOW DEPTH (IN)	53	0	0	0	0	0	0	0	0	0	0	0	0	0
NORMAL NO. DAYS WITH: SNOWFALL ≥ 1.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

PRECIPITATION (inches) 2004 MIAMI, FL (MIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	1.39	0.90	0.61	0.53	4.94	6.37	4.99	5.19	4.69	6.25	2.80	0.44	39.10
1976	0.95	3.54	0.23	4.17	10.45	6.81	3.83	9.45	7.75	4.42	2.69	1.61	55.90
1977	1.44	2.10	0.91	1.97	15.82	12.42	5.23	8.28	7.04	1.25	5.94	2.55	64.95
1978	2.07	3.44	2.92	3.50	5.66	5.29	2.69	3.93	3.42	7.68	3.17	2.06	45.83
1979	1.28	0.57	0.30	17.29	5.29	4.06	5.06	4.81	13.36	3.63	1.62	2.84	60.11
1980	1.89	0.88	3.17	10.20	2.14	3.02	9.40	11.32	5.60	6.05	3.47	0.20	57.34
1981	0.61	4.66	1.32	0.05	4.94	5.49	2.78	12.25	14.79	1.62	2.14	0.14	50.79
1982	0.44	1.22	4.22	9.27	8.80	10.82	3.84	5.79	7.62	7.12	7.09	1.18	67.41
1983	5.36	8.07	2.82	1.79	1.44	8.66	6.20	5.88	7.48	3.52	2.01	4.19	57.42
1984	0.18	0.70	6.12	4.51	10.91	7.24	7.38	5.44	10.45	2.35	4.04	0.70	60.02
1985	0.35	0.06	1.35	3.27	3.19	6.33	11.23	11.88	8.59	5.17	1.37	3.47	56.26
1986	5.04	1.72	10.57	0.71	8.24	9.06	7.81	7.67	4.38	3.96	4.75	2.21	66.12
1987	0.87	2.62	3.82	0.38	4.99	5.48	5.17	3.24	10.17	4.33	4.92	4.28	50.27
1988	1.88	0.61	0.39	1.82	5.28	10.36	10.90	7.89	3.09	1.49	0.76	0.12	44.59
1989	0.67	0.71	0.89	2.14	0.99	10.83	3.53	12.78	5.83	2.65	0.99	0.62	42.63
1990	0.24	1.19	2.28	6.96	7.79	6.84	4.31	11.06	3.52	4.82	1.67	1.03	51.71
1991	1.59	2.04	2.32	5.16	2.50	7.51	7.29	8.84	11.17	21.64	1.18	0.18	71.42
1992	1.80	1.49	2.67	2.43	0.55	13.17	4.21	7.22	6.48	2.02	13.84	1.94	57.82
1993	5.04	2.14	5.98	3.08	4.13	3.64	7.28	5.13	12.59	7.23	6.06	0.49	62.79
1994	3.59	5.66	1.94	2.14	4.72	4.97	3.03	16.64	13.50	9.50	8.92	4.95	79.56
1995	3.13	1.41	4.60	3.73	2.94	20.33	6.36	13.13	10.37	9.91	2.53	0.86	79.30
1996	2.33	0.80	1.40	3.37	8.30	11.67	5.25	5.55	7.21	10.10	0.69	1.04	57.71
1997	1.71	1.57	2.06	5.16	9.80	13.18	7.62	6.28	12.47	2.60	2.89	5.27	70.61
1998	1.04	6.62	5.97	0.66	3.45	6.67	5.41	11.66	14.41	5.70	6.66	1.98	70.23
1999	2.98	0.27	0.25	1.46	4.89	11.08	3.60	13.87	7.01	14.55	1.45	2.68	64.09
2000	0.52	1.24	0.35	3.36	1.80	5.19	5.29	7.42	10.58	18.65	0.50	6.15	61.05
2001	0.60	0.05	4.76	1.79	6.10	8.94	6.92	7.27	17.99	13.16	1.42	3.03	72.03
2002	0.22	3.58	0.89	1.32	8.23	15.41	12.76	6.55	6.48	0.72	3.74	3.39	63.29
2003	0.43	0.83	3.89	2.87	11.05	11.94	6.32	9.65	13.18	4.09	6.64	1.24	72.13
2004	2.52	3.08	1.50	4.00	2.45	6.79	6.74	10.09	10.88	5.54	0.34	0.51	54.44
POR= 65 YRS	1.99	2.00	2.39	3.45	5.96	8.94	6.55	7.78	8.90	7.13	2.97	1.87	59.93

WBAN : 12839

AVERAGE TEMPERATURE (°F) 2004 MIAMI, FL (MIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	72.7	73.1	73.4	77.5	79.4	81.5	81.1	82.6	82.0	79.2	72.3	69.0	77.0
1976	64.7	68.8	75.8	75.1	78.5	79.1	83.1	81.9	80.4	76.3	71.5	68.2	75.3
1977	61.1	66.1	74.9	74.8	77.0	81.7	83.7	83.2	83.0	76.5	74.0	69.1	75.4
1978	64.0	63.2	68.9	74.0	79.2	81.9	82.5	82.6	82.0	78.8	75.7	73.0	75.5
1979	65.0	64.9	69.2	77.8	80.6	81.9	83.2	82.1	80.7	77.9	75.4	70.2	75.7
1980	67.5	64.0	73.2	75.4	79.0	81.4	82.6	82.8	82.1	80.1	74.3	67.3	75.8
1981	59.7	69.5	70.1	77.8	79.6	83.7	85.0	83.2	81.2	79.7	71.4	67.8	75.7
1982	67.8	74.4	74.7	77.9	77.2	82.0	84.3	84.0	82.7	77.9	75.0	72.6	77.5
1983	67.2	67.5	67.6	71.9	78.2	81.8	85.0	83.3	81.6	78.3	72.5	69.8	75.4
1984	67.0	68.6	70.4	73.2	77.1	79.8	81.9	82.6	80.1	78.2	71.5	71.1	75.1
1985	62.1	68.4	72.5	74.2	79.1	82.4	81.0	82.4	80.6	80.5	75.6	66.0	75.4
1986	65.2	69.4	68.6	71.7	77.5	81.3	83.1	83.5	83.3	80.3	79.3	73.6	76.4
1987	66.1	70.8	71.9	70.6	78.7	84.2	84.2	85.4	83.6	77.6	75.3	69.8	76.5
1988	67.9	67.7	70.7	76.1	77.9	82.0	83.1	83.6	84.0	79.1	76.9	70.5	76.6
1989	72.7	70.8	73.6	77.1	81.0	82.7	83.3	84.3	84.0	79.0	76.2	65.0	77.5
1990	73.6	74.0	73.7	75.2	80.3	83.0	83.5	83.7	83.1	80.4	74.4	72.9	78.2
1991	72.9	69.7	73.9	78.4	81.5	82.9	83.5	84.6	82.4	78.9	73.1	72.2	77.8
1992	67.4	70.5	71.9	74.0	77.8	81.5	84.9	84.4	83.2	79.5	76.8	71.6	77.0
1993	73.2	68.9	71.5	74.0	79.2	83.3	84.6	84.8	83.0	80.8	75.9	68.9	77.3
1994	69.4	73.3	74.0	78.2	81.0	83.6	83.7	82.8	81.9	80.3	77.2	72.0	78.1
1995	67.3	67.9	73.5	77.5	82.1	81.8	84.5	84.2	83.6	81.5	73.8	68.2	77.2
1996	68.1	66.7	69.7	76.0	81.2	82.5	84.5	83.1	83.2	78.4	74.3	70.2	76.5
1997	68.3	74.3	76.3	75.7	80.6	82.2	84.1	84.3	81.5	78.6	74.1	68.9	77.4
1998	70.1	69.2	69.5	76.0	80.7	85.4	84.8	84.9	83.2	80.8	76.3	73.4	77.9
1999	70.0	69.6	70.5	77.8	78.6	80.9	84.0	83.6	81.9	79.2	74.3	70.0	76.7
2000	68.6	69.5	75.0	75.1	80.2	82.1	83.8	83.4	83.0	78.1	73.5	68.8	76.8
2001	63.2	74.2	73.5	76.0	77.7	82.6	82.6	84.4	81.6	79.1	74.2	73.3	76.9
2002	69.8	70.0	75.3	78.5	80.8	80.3	83.0	83.9	83.3	82.1	73.8	70.6	77.6
2003	63.2	73.0	78.7	75.8	81.4	82.3	84.5	83.1	82.3	80.7	76.0	67.0	77.3
2004	66.8	70.8	72.8	73.9	79.6	84.0	84.4	83.8	82.6	79.2	75.1	68.7	76.8
POR= 65 YRS	67.2	68.5	71.9	75.2	78.4	81.4	82.6	82.9	81.8	78.3	73.2	69.2	75.9

HEATING DEGREE DAYS (base 65°F) 2004 MIAMI, FL (MIA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0	0	0	0	33	49	93	27	0	0	0	0	202
1976-77	0	0	0	0	9	32	165	62	3	0	0	0	271
1977-78	0	0	0	0	6	58	123	99	34	0	0	0	320
1978-79	0	0	0	0	0	1	84	82	13	0	0	0	180
1979-80	0	0	0	0	6	10	50	95	39	0	0	0	200
1980-81	0	0	0	0	7	59	168	25	12	0	0	0	271
1981-82	0	0	0	0	1	80	65	1	3	0	0	0	150
1982-83	0	0	0	0	0	22	50	25	38	2	0	0	137
1983-84	0	0	0	0	4	69	54	37	17	0	0	0	181
1984-85	0	0	0	0	9	18	135	61	4	1	0	0	228
1985-86	0	0	0	0	2	78	76	22	54	0	0	0	232
1986-87	0	0	0	0	0	0	83	15	6	27	0	0	131
1987-88	0	0	0	0	3	29	49	38	26	0	0	0	145
1988-89	0	0	0	0	0	36	1	49	18	0	0	0	104
1989-90	0	0	0	1	0	110	7	4	0	0	0	0	122
1990-91	0	0	0	0	0	4	2	31	5	0	0	0	42
1991-92	0	0	0	0	7	0	38	7	6	0	0	0	58
1992-93	0	0	0	0	2	10	5	7	21	0	0	0	45
1993-94	0	0	0	0	4	31	26	15	1	0	0	0	77
1994-95	0	0	0	0	0	14	39	51	1	0	0	0	105
1995-96	0	0	0	0	3	77	65	77	41	0	0	0	263
1996-97	0	0	0	0	0	26	58	2	0	0	0	0	86
1997-98	0	0	0	0	2	49	20	29	25	0	0	0	125
1998-99	0	0	0	0	0	8	35	19	5	0	0	0	67
1999-00	0	0	0	0	0	26	37	19	0	0	0	0	82
2000-01	0	0	0	0	4	51	121	0	6	0	0	0	182
2001-02	0	0	0	0	0	11	53	14	4	0	0	0	82
2002-03	0	0	0	0	5	21	101	2	5	2	0	0	136
2003-04	0	0	0	0	0	54	34	24	0	0	0	0	112
2004-	0	0	0	0	0	41							

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COOLING DEGREE DAYS (base 65°F) 2004 MIAMI, FL (MIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	261	233	276	382	456	501	508	553	517	448	257	178	4570
1976	92	144	336	309	424	429	569	530	470	361	209	141	4014
1977	50	97	318	299	381	508	587	574	549	364	284	191	4202
1978	97	54	163	273	449	515	547	552	513	437	329	254	4183
1979	90	81	149	391	492	516	572	537	481	407	324	178	4218
1980	138	75	296	321	441	501	555	563	519	476	292	135	4312
1981	10	154	177	389	460	568	625	570	492	460	198	173	4276
1982	161	270	311	394	385	518	606	596	537	406	304	264	4752
1983	125	101	124	213	417	514	628	576	503	419	236	221	4077
1984	124	144	194	252	380	452	532	554	460	416	213	214	3935
1985	55	164	244	285	445	529	505	546	476	488	329	114	4180
1986	86	150	175	207	395	495	569	582	556	483	432	272	4402
1987	122	186	227	202	430	580	603	639	565	401	314	182	4451
1988	145	123	209	339	408	516	571	584	578	445	364	216	4498
1989	247	219	292	367	502	540	576	603	578	442	346	114	4826
1990	279	262	276	314	479	547	578	587	552	486	287	254	4901
1991	254	167	288	408	515	547	583	614	531	437	255	231	4830
1992	121	173	226	277	404	503	624	609	553	454	366	222	4532
1993	269	123	227	277	449	557	613	622	550	497	338	159	4681
1994	167	252	288	403	503	566	589	557	512	479	374	239	4929
1995	119	138	274	377	537	509	612	602	565	519	272	178	4702
1996	168	134	193	335	512	532	609	566	555	421	284	195	4504
1997	164	270	360	326	489	523	600	607	502	427	282	179	4729
1998	186	152	174	337	493	616	623	621	555	498	348	277	4880
1999	195	152	184	390	429	482	594	583	513	447	285	190	4444
2000	152	154	317	312	480	518	592	579	545	411	267	178	4505
2001	71	266	277	335	400	532	552	605	505	444	283	276	4546
2002	211	160	330	409	497	465	565	591	555	537	275	199	4794
2003	53	233	436	333	516	523	611	569	520	494	338	123	4749
2004	98	197	247	274	464	575	608	589	531	449	311	165	4508

SNOWFALL (inches) 2004 MIAMI, FL (MIA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976-77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979-80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980-81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
2000-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
2001-02													
2002-03													
2003-04													
2004-													
POR= 57 YRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T

WBAN : 12839

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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2004
MIAMI,
FLORIDA (MIA)

Miami is located on the lower east coast of Florida. To the east of the city lies Biscayne Bay, an arm of the ocean, about 15 miles long and 3 miles wide. East of the bay is the island of Miami Beach, a mile or less wide and about 10 miles long, and beyond Miami Beach is the Atlantic Ocean. The surrounding countryside is level and sparsely wooded.

The climate of Miami is essentially subtropical marine, featured by a long and warm summer, with abundant rainfall, followed by a mild, dry winter. The marine influence is evidenced by the low daily range of temperature and the rapid warming of cold air masses which pass to the east of the state. The Miami area is subject to winds from the east or southeast about half the time, and in several specific respects has a climate whose features differ from those farther inland.

One of these features is the annual precipitation for the area. During the early morning hours more rainfall occurs at Miami Beach than at the airport, while during the afternoon the reverse is true. The airport office is about 9 miles inland.

An even more striking difference appears in the annual number of days with temperatures reaching 90 degrees or higher, with inland stations having about four times more than the beach. Minimum temperature contrasts also are particularly marked under proper conditions, with the difference between inland locations and the Miami Beach station frequently reaching to 15 degrees or more, especially in winter.

Freezing temperatures occur occasionally in the suburbs and farming districts southwest, west, and northwest of the city, but rarely near the ocean.

Hurricanes occasionally affect the area. The months of greatest frequency are September and October. Destructive tornadoes are very rare. Funnel clouds are occasionally sighted and a few touch the ground briefly but significant damage is seldom reported. Waterspouts are often visible from the beaches during the summer months, however, significant damage is seldom reported. June, July, and August have the highest frequency of dangerous lightning events.

STATION LOCATION

MIAMI, FLORIDA

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 THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAIN GAUGE	WINDHOLE GAUGE	8 INCH RAIN GAUGE		
*NOTE: <u>AIRPORT</u> General Aviation Center	3/1/77	07/01/96	9200 ft. WNW	25°49'	80°17'	7	p23		q4	19	16	16	16	p6 r6		p. Not moved 3/1/77. q. Minor move 4/1/78. Station type changed from WSM to WSCMO 3/1/80. r. Type change 07/1985.	
International Airport	07/01/96	Present	NA	25°49'	80°18'	s26								S		ASOS Commissioned 07/01/96 s. Ground elevation	

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* NOTES: For earlier station history see previous edition.