

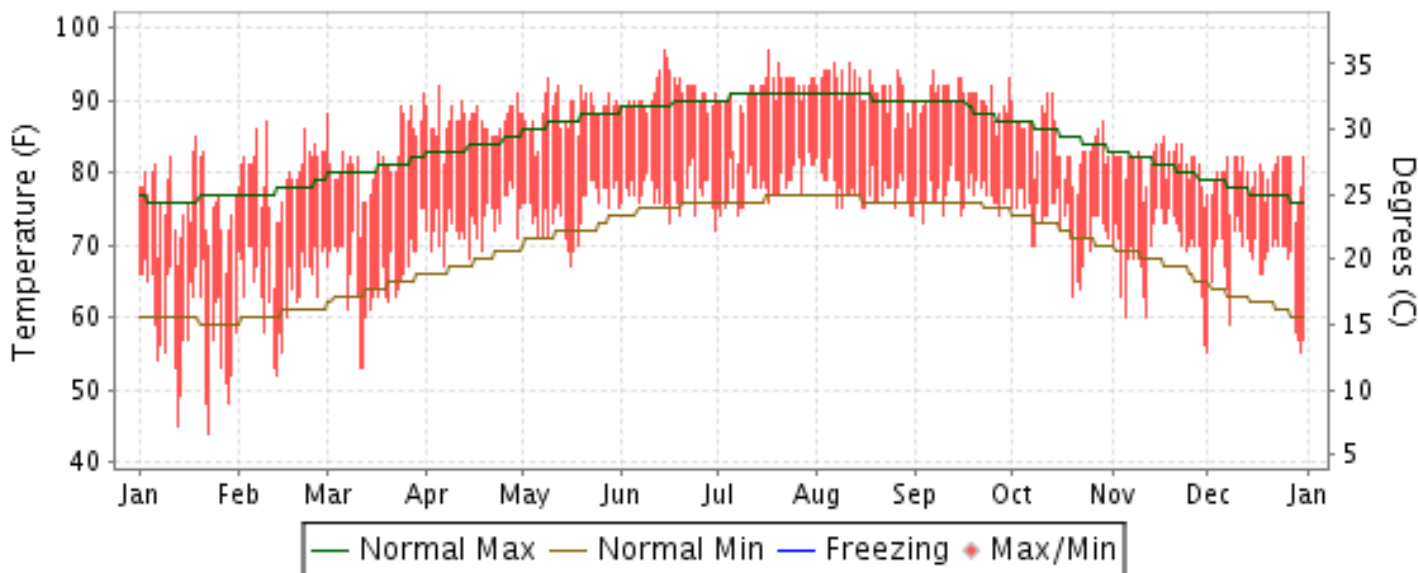


2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

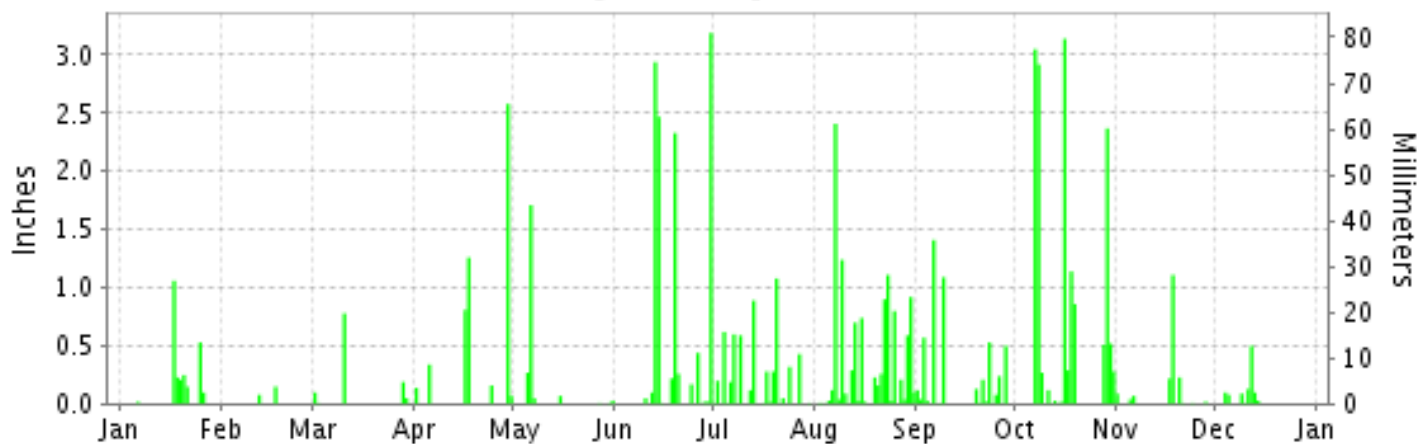
ISSN 0198-1269

MIAMI, FLORIDA (KMIA)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2011

MIAMI (KMIA)

LATITUDE: 25° 47'N LONGITUDE: -80° 18'W ELEVATION (FT): GRND: 29 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	75.8	79.8	82.1	87.2	88.6	91.2	91.2	91.7	90.5	84.4	81.4	79.5	85.3	
	HIGHEST DAILY MAXIMUM	85	87	91	92	93	97	97	95	94	91	85	82	97	
	DATE OF OCCURRENCE	19	10	31	05	09	14	17	11+	06	13+	17	31+	JUL 17	
	MEAN DAILY MINIMUM	58.4	64.3	65.8	72.9	74.5	77.1	78.2	77.5	77.1	72.7	69.1	66.9	71.2	
	LOWEST DAILY MINIMUM	44	52	53	67	67	72	74	74	73	63	56	55	44	
	DATE OF OCCURRENCE	23	13	12+	06	16	30	07+	31+	03	20	30	30+	JAN 23	
	AVERAGE DRY BULB	67.1	72.1	74.0	80.1	81.6	84.2	84.7	84.6	83.8	78.6	75.3	73.2	78.3	
	MEAN WET BULB	60.9	64.9	65.4	71.5	71.8	74.8	76.9	77.3	76.4	71.8	67.9	65.8	70.5	
	MEAN DEW POINT	56.5	60.7	60.1	67.3	67.0	71.3	73.9	74.7	73.6	68.3	63.8	61.3	66.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	1	3	12	23	27	27	22	3	0	0	118	
MAXIMUM <= 32°	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		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	48	8	3	0	0	0	0	0	0	0	0	0	59	
	COOLING DEGREE DAYS	119	215	286	458	519	581	620	617	571	428	317	261	4992	
RH	MEAN (PERCENT)	71	70	65	68	64	69	72	76	74	73	70	68	70	
	HOUR 01 LST	79	81	75	76	74	77	81	83	84	78	78	77	79	
	HOUR 07 LST	81	79	71	71	65	68	72	76	75	76	75	75	74	
	HOUR 13 LST	57	53	49	56	52	58	63	69	66	63	58	56	58	
	HOUR 19 LST	70	71	64	69	65	72	73	77	76	75	69	69	71	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	4	1	1	0	0	1	0	1	0	0	0	0	8	
	THUNDERSTORMS	2	0	1	3	0	7	10	11	8	7	0	0	49	
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.)	30.02	30.09	30.06	30.00	29.94	29.96	29.96	29.89	29.92	29.90	30.02	30.09	29.99	
	MEAN SEA-LEVEL PRESS. (IN.)	30.05	30.12	30.10	30.03	29.98	29.99	30.00	29.93	29.95	29.93	30.06	30.13	30.02	
WINDS	RESULTANT SPEED (MPH)	0.5	3.3	4.3	5.9	5.1	5.3	4.2	1.4	2.8	4.0	5.1	5.4	3.6	
	RES. DIR. (TENS OF DEGS.)	16	12	10	11	10	09	11	17	11	07	06	08	10	
	MEAN SPEED (MPH)	6.8	7.0	8.3	8.3	8.3	7.6	6.0	5.1	5.1	7.7	8.5	8.1	7.2	
	PREVAIL.DIR.(TENS OF DEGS.)	11	13	07	10	09	08	12	13	10	06	05	09	09	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	23	22	35	36	25	40	22	26	25	32	22	24	40	
	DIR. (TENS OF DEGS.)	25	20	31	06	25	14	09	22	22	09	08	08	14	
	DATE OF OCCURRENCE	18	07	10	17	15	30	22	07	06	08	19	03	JUN 30	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	35	31	52	47	31	55	30	39	35	47	31	30	55	
DIR. (TENS OF DEGS.)	31	19	31	09	25	15	29	12	23	15	02	08	15		
DATE OF OCCURRENCE	25	07	10	17	15	30	20	07	06	28	05	03	JUN 30		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.55	0.23	1.13	5.36	2.15	12.22	5.71	11.08	4.99	15.52	1.80	1.04	63.78	
	GREATEST 24-HOUR (IN.)	1.06	0.15	0.78	2.58	1.98	3.19	1.08	2.43	1.41	5.37	1.25	0.60	5.37	
	DATE OF OCCURRENCE	17	17	10	29	05-06	30	20	06-07	06	07-08	17-18	12-13	OCT 07-08	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	8	2	5	7	7	13	18	25	15	14	9	8	131	
PRECIPITATION 0.10	7	1	3	6	2	9	12	16	9	12	3	4	84		
PRECIPITATION 1.00	1	0	0	2	1	4	1	3	2	5	1	0	20		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0															

NORMALS, MEANS, AND EXTREMES MIAMI (KMIA)

LATITUDE: 25° 47'N **LONGITUDE:** -80° 18'W **ELEVATION (FT):** GRND: 29 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	64	75.7	77.1	79.8	82.8	86.0	88.3	89.6	90.0	88.4	85.0	80.6	77.0	83.4	
	HIGHEST DAILY MAXIMUM	69	88	89	93	96	96	98	98	98	97	95	91	89	98	
	YEAR OF OCCURRENCE		1987	2008	2003	1971	2008	2009	1998	1990	1987	1980	2002	2009	JUN 2009	
	MEAN OF EXTREME MAXS.	64	83.6	85.3	87.7	90.0	91.4	93.0	93.5	93.9	92.4	89.9	86.1	83.8	89.2	
	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	64	59.6	61.0	64.4	68.1	72.2	75.1	76.6	76.7	76.0	72.4	66.7	61.9	69.2	
	LOWEST DAILY MINIMUM	69	30	32	32	46	53	60	69	68	68	68	51	39	30	
	YEAR OF OCCURRENCE		1985	1947	1980	1971	1945	1984	2002	1950	1983	1943	1950	1989	DEC 1989	
	MEAN OF EXTREME MINS.	64	42.3	45.7	49.2	56.9	64.4	70.1	72.1	72.4	72.0	63.0	52.6	45.5	58.9	
	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	64	67.7	69.0	72.1	75.5	79.1	81.7	83.1	83.4	82.2	78.8	73.7	69.4	76.3	
	MEAN WET BULB	28	61.2	62.5	64.1	66.5	70.9	74.8	75.8	76.2	75.6	72.0	67.4	63.4	69.2	
	MEAN DEW POINT	28	59.1	60.4	61.9	64.0	68.8	73.3	74.3	74.7	74.3	70.4	65.7	61.4	67.4	
	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	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	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	0.0	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	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	
	HOURLY 01 LST	30	81	80	78	76	79	83	82	83	84	82	81	80	81	
	HOURLY 07 LST	30	85	84	82	79	80	83	83	85	87	85	84	84	83	
	HOURLY 13 LST	30	59	57	56	54	58	65	63	65	66	63	63	60	61	
	HOURLY 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)	48	1.0	0.6	0.5	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.5	0.7	4.8	
	THUNDERSTORMS	64	0.8	1.1	1.8	2.8	6.3	12.5	14.4	15.2	11.3	4.2	1.0	0.6	72.0	
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)	28	30.09	30.07	30.04	30.00	29.98	29.99	30.03	29.99	29.94	29.96	30.02	30.08	30.02	
	MEAN SEA-LEVEL PRES. (IN)	28	30.11	30.09	30.06	30.03	30.00	30.01	30.05	30.01	29.96	29.98	30.04	30.10	30.04	
WINDS	MEAN SPEED (MPH)	28	8.8	9.0	10.0	9.8	9.0	7.7	7.4	7.2	7.6	8.7	9.1	8.5	8.6	
	PREVAIL.DIR.(TENS OF DEGS)	43	35	12	12	11	09	12	12	11	09	06	10	35	12	
	MAXIMUM 2-MINUTE: SPEED (MPH)	15	32	55	43	37	43	41	41	60	43	69	36	29	69	
	DIR. (TENS OF DEGS)		33	19	26	16	10	14	10	13	10	15	18	22	15	
	YEAR OF OCCURRENCE		2009	1998	2003	2008	1999	2007	2005	2005	1998	2005	1998	1997	OCT 2005	
	MAXIMUM 3-SECOND SPEED (MPH)	15	40	104	52	52	63	55	56	78	51	92	44	40	104	
	DIR. (TENS OF DEGS)		26	19	31	15	33	15	07	12	28	15	31	23	19	
YEAR OF OCCURRENCE		2004	1998	2011	2008	1998	2011	2009	2005	2004	2005	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)	69	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)	69	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)	69	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	
YEAR OF OCCURRENCE																
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) 2011 MIAMI (KMIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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	.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
2005	1.92	0.62	3.97	3.27	7.47	17.60	5.00	9.27	9.91	5.48	2.70	1.00	68.21
2006	0.32	3.47	1.10	0.23	8.62	7.05	7.32	12.95	16.73	1.64	1.63	3.11	64.17
2007	0.54	2.13	2.70	5.33	5.28	15.22	9.03	4.44	8.22	9.63	0.66	0.79	63.97
2008	1.25	4.11	5.24	3.78	1.71	9.63	8.93	9.99	7.87	6.51	0.97	0.28	60.27
2009	0.34	0.12	1.78	1.17	7.53	11.64	6.17	7.91	6.83	2.62	2.97	3.01	52.09
2010	0.89	4.69	2.81	8.95	3.42	7.20	7.36	8.75	15.89	1.58	2.35	1.21	65.10
2011	2.55	0.23	1.13	5.36	2.15	12.22	5.71	11.08	4.99	15.52	1.80	1.04	63.78
POR= 64 YRS	1.84	2.07	2.44	3.32	5.85	9.32	6.23	8.04	9.04	7.08	2.90	1.93	60.06

WBAN : 12839

AVERAGE TEMPERATURE (°F) 2011 MIAMI (KMIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2005	68.0	68.6	71.3	73.6	79.2	81.3	85.2	85.2	83.2	79.4	75.5	69.4	76.7
2006	69.3	67.6	72.1	77.3	79.5	82.7	83.0	83.8	82.8	80.2	73.0	74.5	77.2
2007	72.5	69.3	73.9	75.1	78.6	81.4	83.9	85.0	83.2	81.5	74.9	74.9	77.9
2008	70.3	74.3	74.5	76.8	81.4	83.3	82.9	83.9	83.5	78.3	71.8	71.7	77.7
2009	67.6	68.1	72.7	77.0	80.6	83.5	85.0	85.4	83.9	82.4	75.8	73.0	77.9
2010	64.1	64.7	67.7	76.4	82.5	85.5	84.9	85.1	83.5	79.6	73.8	61.4	75.8
2011	67.1	72.1	74.0	80.1	81.6	84.2	84.7	84.6	83.8	78.6	75.3	73.2	78.3
POR= 64 YRS	67.7	69.0	72.1	75.5	79.1	81.7	83.1	83.4	82.2	78.8	73.7	69.4	76.3

HEATING DEGREE DAYS (base 65°F) 2011 MIAMI (KMIA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
2004-05	0	0	0	0	0	41	44	24	16	0	0	0	125
2005-06	0	0	0	0	2	18	33	45	7	0	0	0	105
2006-07	0	0	0	0	22	3	12	38	0	1	0	0	76
2007-08	0	0	0	0	0	4	27	5	3	1	0	0	40
2008-09	0	0	0	1	3	6	40	36	14	1	0	0	101
2009-10	0	0	0	0	2	16	149	86	34	0	0	0	287
2010-11	0	0	0	0	5	144	48	8	3	0	0	0	208
2011-	0	0	0	0	0	0							

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COOLING DEGREE DAYS (base 65°F) 2011 MIAMI (KMIA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
2005	144	131	216	266	446	495	632	635	552	451	323	158	4449
2006	174	125	234	378	457	541	567	591	540	477	269	302	4655
2007	252	162	285	308	430	501	594	626	550	518	302	318	4846
2008	200	283	303	362	514	555	561	591	562	418	213	221	4783
2009	128	128	259	368	489	563	626	638	574	543	331	270	4917
2010	127	82	127	349	546	625	625	630	560	458	278	41	4448
2011	119	215	286	458	519	581	620	617	571	428	317	261	4992

SNOWFALL (inches) 2011 MIAMI (KMIA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	0.0			
2001-02													
2002-03													
2003-04													
2004-05													
2005-													
POR= 53 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

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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. 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.</p>	<p>GENERAL CONTINUED: WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65 F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY. ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK MEDADATA SYSTEM", URL IS: https://mi3.ncdc.noaa.gov/mi3qry/login.cfm SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p>NOTE: The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2011 MIAMI FLORIDA (KMIA)

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 History

MIAMI, FL

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
MIAMI INTL AP	1977-02-28	1977-03-01	25° 48'	-80° 16'	13		COOP, WXSVC
MIAMI INTL AP	1980-08-01	1981-12-31	25° 48'	-80° 18'	12		COOP, WXSVC
MIAMI INTL AP	1948-07-01	1957-01-01	25° 49'	-80° 16'	23		AIRWAYS, COOP, UPPERAIR
MIAMI INTL AP	1981-12-31	1995-01-24	25° 48'	-80° 18'	12		COOP
MIAMI INTL AP	1995-01-24	1996-07-01	25° 46'	-80° 16'	35	1 MI S	COOP
MIAMI INTL AP	1942-01-01	1948-07-01	25° 49'	-80° 16'			AIRWAYS, UPPERAIR
MIAMI INTL AP	1968-01-01	1977-02-28	25° 48'	-80° 16'	13		COOP, UPPERAIR, WXSVC
MIAMI INTL AP	1939-07-01	1942-01-01	25° 55'	-80° 16'			AIRWAYS, UPPERAIR
MIAMI INTL AP	2002-01-08	2010-11-06	25° 47'	-80° 18'	29		ASOS, COOP
MIAMI INTL AP	2010-11-06	Present	25° 47'	-80° 18'	29		ASOS, COOP
MIAMI INTL AP	1957-01-01	1968-01-01	25° 48'	-80° 16'	13		AIRWAYS, COOP, UPPERAIR
MIAMI INTL AP	1996-07-01	2002-01-08	25° 49'	-80° 17'	35		ASOS, COOP
MIAMI INTL AP	1977-03-01	1980-08-01	25° 48'	-80° 18'	12	2.2 MI NW	COOP, WXSVC
MIAMI INTL AP	1932-07-01	1939-07-01	25° 55'	-80° 16'			AIRWAYS

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	1995-07-01	2002-01-08	DAILY	2400	HYGR		
TEMP	2002-01-08	2002-01-09	DAILY	2400	ATEMP		
TEMP	2002-01-09	2004-10-01	DAILY	2400	ATEMP		
PRECIP	2010-11-06	Present	HOURLY	1900	AWPAG	RCRD;HTD	
PRECIP	2010-11-06	Present	HOURLY	2400	AWPAG	RCRD;HTD	
TEMP	1980-08-01	1995-01-24	DAILY	2400			
TEMP	1995-01-24	1995-07-01	DAILY	2400	HYGR		
PRECIP	1995-07-01	2002-01-08	DAILY	2400	UNIV	RCRD	
PRECIP	2002-01-09	2004-10-01	HOURLY		AHTB	RCRD;HTD	
PRECIP	1980-08-01	1995-01-24	DAILY	2400	UNIV	RCRD	
PRECIP	1995-01-24	1995-07-01	HOURLY	2400			
PRECIP	1995-07-01	2002-01-08	HOURLY	2400	UNIV	RCRD	
TEMP	2002-01-08	2002-01-09	DAILY	2400	HYGR		
PRECIP	2002-01-08	2002-01-09	DAILY	2400	AHTB	RCRD;HTD	
PRECIP	2002-01-09	2004-10-01	DAILY	2400	FPCPNX		
PRECIP	2004-10-01	2010-11-06	HOURLY	2400	AHTB	RCRD;HTD	
PRECIP	2010-11-06	Present	DAILY	1900	FPCPNX		
PRECIP	1980-08-01	1995-01-24	HOURLY	2400			
PRECIP	2002-01-08	2002-01-09	HOURLY	2400	UNIV	RCRD	
TEMP	2010-11-06	Present	DAILY	1900	ATEMP		
PRECIP	2010-11-06	Present	DAILY	0700	FPCPNX		
PRECIP	2010-11-06	Present	HOURLY	0700	AWPAG	RCRD;HTD	
TEMP	2010-11-06	Present	DAILY	2400	ATEMP		
PRECIP	2010-11-06	Present	DAILY	2400	FPCPNX		
TEMP	2010-11-06	Present	DAILY	0700	ATEMP		
PRECIP	1948-07-01	1980-08-01	HOURLY	2400			
PRECIP	1995-01-24	1995-07-01	DAILY	2400	UNIV	RCRD	
PRECIP	2002-01-08	2002-01-09	HOURLY	2400	AHTB	RCRD;HTD	
PRECIP	2002-01-08	2002-01-09	DAILY	2400	UNIV	RCRD	
PRECIP	2004-10-01	2010-11-06	DAILY	2400	FPCPNX		
TEMP	2004-10-01	2010-11-06	DAILY	2400	ATEMP		

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

Other Station Information can be found at:

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

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

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

Fax Number : (828) 271-4876

TDD : (828) 271-4010

Email : ncdc.info@noaa.gov

NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

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