

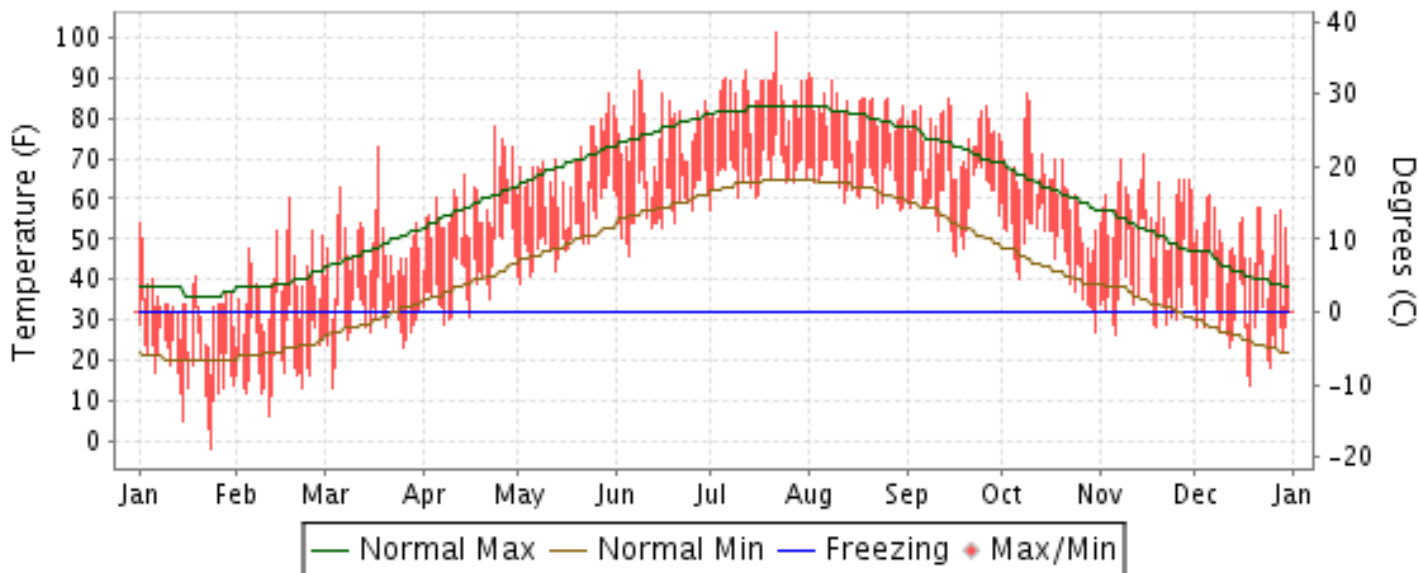


2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

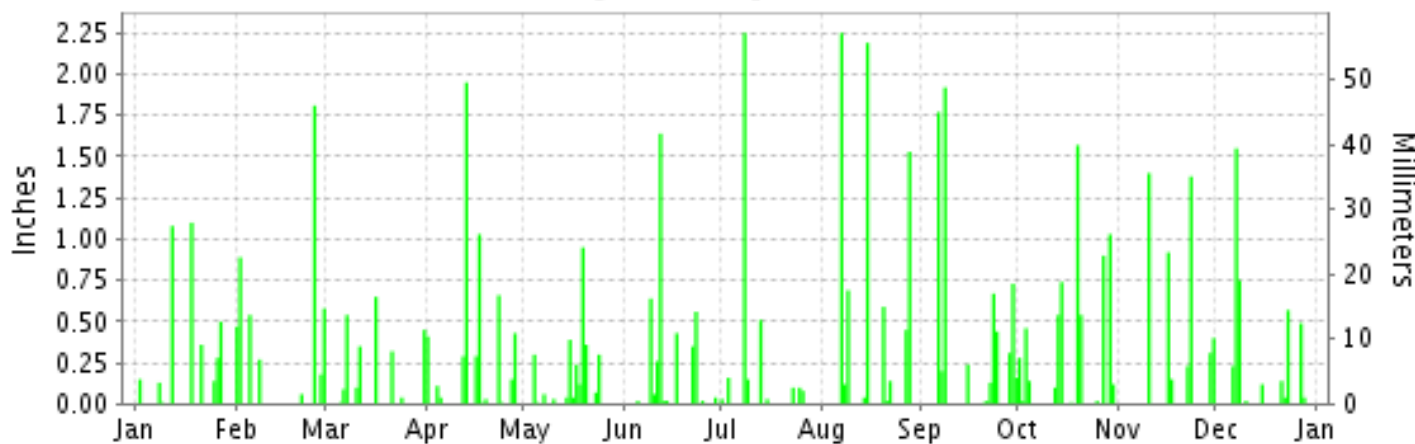
ISSN 0198-4594

PROVIDENCE, RHODE ISLAND (KPVD)

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

PROVIDENCE (KPVJ)

LATITUDE: 41° 43'N LONGITUDE: -71° 25'W ELEVATION (FT): GRND: 60 BARO: 53 TIME ZONE: EASTERN (UTC -5) WBAN: 14765

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	33.7	39.4	47.7	58.8	67.7	76.6	85.5	81.8	75.9	63.9	58.2	48.7	61.5	
	HIGHEST DAILY MAXIMUM	54	60	73	78	86	92	101	91	85	86	71	61	101	
	DATE OF OCCURRENCE	01	18	18	24	30	08	22	01	14	09	15	06	JUL 22	
	MEAN DAILY MINIMUM	18.6	19.9	29.8	41.2	51.0	58.2	66.6	64.5	59.3	46.7	38.3	29.6	43.6	
	LOWEST DAILY MINIMUM	-2	6	13	29	39	46	57	57	46	27	26	14	-2	
	DATE OF OCCURRENCE	24	11	03	08	02	05	01	30	17	31	06	19	JAN 24	
	AVERAGE DRY BULB	26.2	29.7	38.8	50.0	59.4	67.4	76.1	73.2	67.6	55.3	48.3	39.2	52.6	
	MEAN WET BULB	23.7	26.4	33.7	44.8	54.5	61.1	68.1	66.6	62.6	49.8	44.1	35.7	47.6	
	MEAN DEW POINT	17.0	17.4	24.3	38.2	50.6	56.7	63.5	62.6	59.6	44.4	38.8	28.8	41.8	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	1	4	2	0	0	0	0	0	7
	MAXIMUM <= 32°	9	6	1	0	0	0	0	0	0	0	0	1	17	
MINIMUM <= 32°	29	26	21	4	0	0	0	0	0	2	8	23	113		
MINIMUM <= 0°	1	0	0	0	0	0	0	0	0	0	0	0	1		
H/C	HEATING DEGREE DAYS	1195	982	806	445	213	39	0	0	42	304	495	794	5315	
	COOLING DEGREE DAYS	0	0	0	1	45	120	353	262	128	12	0	0	921	
RH	MEAN (PERCENT)	69	63	60	68	78	72	68	73	79	70	72	67	70	
	HOUR 01 LST	74	66	68	80	87	86	83	85	90	81	82	74	80	
	HOUR 07 LST	79	71	64	69	78	70	66	72	82	72	78	72	73	
	HOUR 13 LST	58	55	47	56	65	57	51	57	63	54	52	55	56	
	HOUR 19 LST	69	64	61	70	80	74	69	77	82	75	77	69	72	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	2	3	1	2	6	1	0	1	2	1	1	4	24	
	THUNDERSTORMS	1	1	0	3	2	5	4	3	3	0	0	0	22	
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.)	29.85	29.89	30.04	29.87	29.93	29.84	29.83	29.80	29.98	29.90	30.02	30.06	29.92	
	MEAN SEA-LEVEL PRESS. (IN.)	29.93	29.96	30.11	29.94	30.00	29.90	29.89	29.87	30.04	29.98	30.08	30.12	29.99	
WINDS	RESULTANT SPEED (MPH)	5.0	5.3	2.2	2.4	1.5	0.9	2.9	3.1	1.0	2.8	2.7	3.2	2.0	
	RES. DIR. (TENS OF DEGS.)	31	29	29	23	06	26	24	20	17	31	25	28	28	
	MEAN SPEED (MPH)	7.4	9.2	9.8	9.9	9.2	7.4	7.1	7.6	6.9	7.9	7.4	7.6	8.1	
	PREVAIL.DIR.(TENS OF DEGS.)	30	30	29	21	02	20	21	20	20	27	21	29	02	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	31	40	31	36	28	33	24	43	28	32	32	43	43	
	DIR. (TENS OF DEGS.)	03	19	29	21	21	30	21	17	36	20	18	24	24	
	DATE OF OCCURRENCE	12	25	07	05	06	09	21	28	06	20	30	22	DEC 22	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	43	51	44	51	43	46	32	64	32	44	40	60	64	
DIR. (TENS OF DEGS.)	35	32	18	16	19	31	21	11	36	36	18	24	11		
DATE OF OCCURRENCE	12	19	06	17	06	09	21	28	06	30	30	22	AUG 28		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.75	4.80	2.55	5.41	2.91	4.06	3.41	8.02	6.60	6.47	4.79	3.95	56.72	
	GREATEST 24-HOUR (IN.)	1.10	1.81	0.65	2.20	1.29	1.89	2.40	2.25	1.96	2.11	1.61	2.29	2.40	
	DATE OF OCCURRENCE	18	25	16	12-13	19-20	11-12	08-09	07	07-08	19-20	22-23	07-08	JUL 08-09	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	9	8	9	13	13	12	9	10	12	14	7	10	126	
PRECIPITATION 0.10	8	7	6	9	7	6	6	8	10	11	7	7	92		
PRECIPITATION 1.00	2	1	0	2	0	1	1	3	2	2	2	1	17		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	30.7	8.5	3.7	T	0.0	0.0	0.0	0.0	0.0	2.3	T	T	45.2	
	GREATEST 24-HOUR (IN.)	12.2	4.9	2.9	T	0.0	0.0	0.0	0.0	0.0	1.2	T	T	12.2	
	DATE OF OCCURRENCE	12	01	31	01						30	23	25+	JAN 12	
	MAXIMUM SNOW DEPTH (IN.)	12	12	1	0	0	0	0	0	0	1	0	0	12	
	DATE OF OCCURRENCE	27	02	24							30+			FEB 02	
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	7	2	1	0	0	0	0	0	0	2	0	0	12		

NORMALS, MEANS, AND EXTREMES PROVIDENCE (KPVJ)

LATITUDE: 41° 43'N LONGITUDE: -71° 25'W ELEVATION (FT): GRND: 60 BARO: 53 TIME ZONE: EASTERN (UTC -5) WBAN: 14765

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	37.1	39.3	47.7	58.1	68.5	77.3	82.6	80.9	73.4	62.9	52.4	42.1	60.2
	MEAN DAILY MAXIMUM	64	37.0	39.0	46.5	58.0	67.8	76.9	82.3	80.8	73.6	63.3	52.7	41.5	60.0
	HIGHEST DAILY MAXIMUM	58	69	72	85	98	96	97	102	104	100	86	78	77	104
	YEAR OF OCCURRENCE		2002	1985	1998	1976	2010	2008	2010	1975	1983	2011	1993	1998	AUG 1975
	MEAN OF EXTREME MAXS.	64	56.3	56.1	66.2	79.0	85.7	91.3	93.9	91.8	87.1	79.2	69.5	60.1	76.4
	NORMAL DAILY MINIMUM	30	20.3	22.5	30.0	39.1	48.8	57.9	64.1	62.8	54.5	43.1	35.1	25.6	42.0
	MEAN DAILY MINIMUM	64	20.6	22.2	29.5	39.0	48.1	57.5	63.9	62.6	54.5	43.6	35.5	25.4	41.9
	LOWEST DAILY MINIMUM	58	-13	-7	1	14	29	41	0	40	33	20	6	-10	-13
	YEAR OF OCCURRENCE		1976	1979	1967	1954	1956	1980	1996	1965	1980	1976	1989	1980	JAN 1976
	MEAN OF EXTREME MINS.	64	2.5	5.1	14.1	27.5	36.7	46.3	54.0	51.0	40.1	29.7	21.2	8.2	28.0
	NORMAL DRY BULB	30	28.7	30.9	38.8	48.6	58.7	67.6	73.3	71.9	64.0	53.0	43.8	33.8	51.1
	MEAN DRY BULB	64	28.8	30.6	38.1	48.5	58.0	67.4	73.1	71.7	64.1	53.5	44.1	33.5	51.0
	MEAN WET BULB	28	24.9	26.0	32.0	41.1	50.9	60.6	65.8	65.0	58.7	48.0	39.2	29.6	45.2
	MEAN DEW POINT	28	20.5	21.5	27.8	37.0	47.7	58.0	63.6	63.1	56.5	45.1	35.5	25.5	41.8
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.1	0.7	2.0	4.0	2.7	0.7	0.0	0.0	0.0	10.2
	MAXIMUM <= 32	30	10.4	7.3	1.3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.1	24.3
MINIMUM <= 32	30	27.3	23.6	18.8	4.6	0.1	0.0	0.0	0.0	0.0	2.8	12.6	24.1	113.9	
MINIMUM <= 0	30	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	
H/C	NORMAL HEATING DEG. DAYS	30	1125	965	817	494	221	44	3	9	101	377	637	961	5754
	NORMAL COOLING DEG. DAYS	30	0	0	0	3	25	122	265	223	71	5	0	0	714
RH	NORMAL (PERCENT)	30	65	63	63	63	69	71	72	73	74	71	69	67	68
	HOURLY 01 LST	30	70	69	70	71	79	83	84	86	85	81	75	72	77
	HOURLY 07 LST	30	72	71	72	70	74	76	77	81	83	81	78	74	76
	HOURLY 13 LST	30	57	54	52	49	54	57	56	57	57	54	56	57	55
	HOURLY 19 LST	30	65	62	62	61	65	68	68	73	75	72	69	67	67
S	PERCENT POSSIBLE SUNSHINE	42	56	58	58	57	58	61	63	62	62	61	50	52	58
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	48	1.9	2.0	2.2	2.0	2.0	2.2	1.5	1.3	1.4	2.5	1.6	2.2	22.8
	THUNDERSTORMS	64	0.2	0.3	0.7	1.4	2.6	3.8	4.4	3.6	1.7	0.9	0.7	0.2	20.5
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	42	5.0	5.0	5.3	5.3	5.4	5.1	5.0	4.8	4.6	4.3	5.0	4.9	5.0
	MIDNIGHT-MIDNIGHT (OKTAS)	31	4.6	4.5	4.7	4.8	5.0	4.9	4.9	4.6	4.5	4.2	4.8	4.7	4.7
	MEAN NO. DAYS WITH: CLEAR	42	9.5	8.0	8.4	7.3	6.5	6.6	6.7	8.4	9.4	11.0	8.3	8.3	98.4
	PARTLY CLOUDY	42	6.8	7.1	7.7	8.2	9.9	10.3	11.9	10.3	8.1	7.9	6.9	7.8	102.9
	CLOUDY	42	14.7	13.2	14.9	14.5	14.6	13.1	12.4	12.3	12.4	12.1	14.9	14.9	164.0
PR	MEAN STATION PRESSURE(IN)	28	29.96	29.94	29.92	29.90	29.91	29.89	29.90	29.95	30.00	29.99	29.96	29.97	29.94
	MEAN SEA-LEVEL PRES. (IN)	28	30.02	30.01	30.01	29.96	29.98	29.95	29.97	30.01	30.06	30.06	30.06	30.04	30.01
WINDS	MEAN SPEED (MPH)	28	9.8	10.3	10.8	10.5	9.7	8.9	8.6	8.3	8.3	8.8	9.2	9.6	9.4
	PREVAIL.DIR(TENS OF DEGS)	39	30	31	31	17	17	17	23	22	23	28	30	31	30
	MAXIMUM 2-MINUTE: SPEED (MPH)	16	45	43	46	41	38	38	39	43	39	40	44	44	46
	DIR. (TENS OF DEGS)		02	21	29	13	22	36	32	17	32	00	36	20	29
	YEAR OF OCCURRENCE		2005	2008	1997	2007	2000	1997	2006	2011	2002	1996	2006	2009	MAR 1997
	MAXIMUM 3-SECOND SPEED (MPH)	16	60	54	59	61	48	51	51	64	47	51	53	60	64
	DIR. (TENS OF DEGS)		02	20	28	13	28	36	00	11	19	24	02	24	11
	YEAR OF OCCURRENCE		2005	2000	1997	2007	2010	1997	1996	2011	2005	2006	2010	2011	AUG 2011
PRECIPITATION	NORMAL (IN)	30	4.37	3.45	4.43	4.16	3.66	3.38	3.17	3.90	3.70	3.69	4.40	4.14	46.45
	MAXIMUM MONTHLY (IN)	58	11.66	7.20	16.34	12.74	8.38	11.08	10.52	11.12	10.99	15.38	11.01	10.75	16.34
	YEAR OF OCCURRENCE		1979	1984	2010	1983	1984	1982	2009	1955	2008	2005	1983	1969	MAR 2010
	MINIMUM MONTHLY (IN)	58	0.50	0.39	0.56	1.48	0.71	0.17	0.39	0.71	0.77	0.40	0.41	0.58	0.17
	YEAR OF OCCURRENCE		1970	1987	1981	1966	1964	1999	2002	1984	1959	1994	2001	1955	JUN 1999
	MAXIMUM IN 24 HOURS (IN)	58	3.34	3.14	6.56	4.45	5.17	5.03	4.83	6.71	4.89	6.63	4.18	3.85	6.71
	YEAR OF OCCURRENCE		1962	1978	2010	1983	1984	1984	1976	1979	1961	1962	1983	1969	AUG 1979
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	11.2	9.8	12.3	11.5	11.8	10.5	8.8	9.2	8.9	8.9	10.0	12.0	124.9
	PRECIPITATION >= 1.00	30	1.3	0.9	1.3	1.1	0.7	0.9	0.8	0.9	1.0	1.0	1.4	1.1	12.4
SNOWFALL	NORMAL (IN)	30	10.6	9.0	5.2	0.7	0.3	0.0	0.0	0.0	0.0	0.1	1.4	5.6	32.9
	MAXIMUM MONTHLY (IN)	57	37.2	30.9	31.6	7.6	7.0	T	0.0	0.0	0.0	2.5	8.0	21.7	37.2
	YEAR OF OCCURRENCE		1996	1962	1956	1982	1977	2007	T	0.0	0.0	1979	1989	2009	JAN 1996
	MAXIMUM IN 24 HOURS (IN)	57	20.8	27.6	16.9	7.6	7.0	T	0.0	0.0	0.0	2.5	8.0	14.3	27.6
	YEAR OF OCCURRENCE		1996	1978	1960	1982	1977	2007	0	0	0	1979	1989	2009	FEB 1978
	MAXIMUM SNOW DEPTH (IN)	62	20	30	20	10	2	0	0	0	0	1	7	14	30
	YEAR OF OCCURRENCE		2005	1961	1956	1970	1977	T	0	0	0	2011	1989	2009	FEB 1961
	NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	3.0	2.6	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.7	9.3

PRECIPITATION (inches) 2011 PROVIDENCE (KPVD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	6.09	3.08	3.76	3.64	1.61	11.08	3.51	3.67	3.61	3.08	4.32	1.81	49.26
1983	4.32	4.81	8.84	12.74	4.67	1.91	2.14	2.71	2.16	4.50	11.01	7.71	67.52
1984	2.00	7.20	5.77	4.30	8.38	4.09	5.16	0.71	1.77	4.25	1.95	3.16	48.74
1985	1.18	1.57	3.08	1.65	4.76	4.70	2.88	8.57	1.69	1.78	7.14	1.42	40.42
1986	5.88	3.18	2.86	2.10	2.29	3.27	5.95	3.29	0.97	2.48	5.77	8.09	46.13
1987	4.73	0.39	5.62	6.91	1.80	2.00	1.20	2.58	7.47	2.28	3.40	2.29	40.67
1988	2.69	5.29	4.09	3.11	2.83	0.91	5.73	0.94	2.38	1.77	7.60	1.03	38.37
1989	1.17	2.69	4.13	5.30	6.07	5.84	5.59	6.14	4.75	8.37	4.35	1.66	56.06
1990	5.01	2.93	2.01	5.57	5.70	1.13	3.52	3.74	2.28	4.96	2.45	5.48	44.78
1991	3.44	2.31	6.61	4.80	3.30	0.93	2.76	5.98	5.09	2.65	4.65	3.17	45.69
1992	4.82	2.10	4.04	2.34	1.42	4.61	3.59	6.06	5.09	1.53	5.05	6.83	47.48
1993	2.42	5.06	6.99	5.02	1.12	1.40	2.18	1.23	4.08	3.55	3.35	5.76	42.16
1994	5.53	2.10	7.19	2.07	2.98	2.70	1.34	6.34	4.12	0.40	5.34	4.58	44.69
1995	3.67	3.14	2.03	3.34	2.83	2.89	1.17	1.80	4.06	6.37	4.76	2.18	38.24
1996	5.02	2.19	2.71	4.88	2.44	2.17	5.57	2.19	5.72	6.20	2.38	6.59	48.06
1997	4.27	1.89	4.68	3.25	2.68	2.23	0.96	6.32	0.99	1.80	6.06	2.84	37.97
1998	6.55	5.85	5.86	4.91	6.05	9.61	1.37	2.39	2.30	3.78	2.76	1.27	52.70
1999	6.70	5.45	3.33	1.54	4.25	0.17	0.82	3.25	7.00	4.51	2.85	2.39	42.26
2000	4.19	2.74	5.37	5.06	3.72	4.78	3.64	2.41	3.79	1.31	4.73	4.26	46.00
2001	2.40	1.96	8.78	2.04	3.96	6.72	1.92	4.50	4.40	0.64	0.41	2.46	40.19
2002	2.76	1.72	4.84	3.08	4.97	3.32	0.39	1.91	5.26	3.49	5.66	4.94	42.34
2003	2.04	3.75	5.18	4.35	3.13	5.51	3.62	5.61	3.38	5.51	1.76	6.43	50.27
2004	1.52	2.10	3.50	6.58	2.45	1.44	3.23	6.39	6.95	2.13	4.14	4.90	45.33
2005	4.69	3.28	5.60	4.92	3.59	0.64	1.03	4.57	4.28	15.38	5.60	4.34	57.92
2006	5.11	2.75	0.57	3.19	7.26	9.24	2.05	3.74	3.18	7.12	7.69	2.40	54.30
2007	3.51	2.33	6.48	7.92	2.42	3.23	3.96	1.08	2.55	1.81	2.89	4.63	42.81
2008	2.93	7.04	6.47	4.05	1.95	2.48	5.28	1.85	10.99	1.49	5.33	7.26	57.12
2009	3.94	1.99	2.86	5.87	3.29	3.61	10.52	2.80	2.27	7.13	4.42	6.15	54.85
2010	3.37	4.47	16.34	2.18	2.52	4.19	3.68	2.43	2.38	4.02	3.92	4.04	53.54
2011	3.75	4.80	2.55	5.41	2.91	4.06	3.41	8.02	6.60	6.47	4.79	3.95	56.72
POR= 64 YRS	3.93	3.52	4.54	4.15	3.59	3.16	3.10	3.87	3.75	3.81	4.38	4.26	46.06

WBAN : 14765

AVERAGE TEMPERATURE (°F) 2011 PROVIDENCE (KPVD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	21.5	31.5	38.8	47.8	58.9	63.9	73.6	69.2	64.1	53.2	47.5	38.6	50.7
1983	31.4	32.9	40.4	49.9	56.9	70.2	76.6	74.3	69.6	55.3	46.0	32.5	53.0
1984	26.4	37.1	33.8	47.6	57.4	69.1	71.5	73.5	62.1	56.3	43.6	37.9	51.4
1985	22.5	32.1	40.8	51.0	60.2	64.8	73.0	71.1	65.2	54.6	45.9	30.4	51.0
1986	31.1	29.0	39.9	49.4	59.4	66.4	71.0	69.3	62.3	53.0	41.6	35.4	50.7
1987	29.0	28.6	39.8	48.4	59.3	68.4	72.2	69.6	64.3	51.4	43.0	35.1	50.8
1988	26.8	31.8	39.4	47.0	58.0	66.9	74.3	75.3	63.0	48.9	45.2	32.4	50.8
1989	33.8	29.9	37.5	46.2	59.3	68.7	72.3	72.1	65.3	54.1	42.5	21.8	50.3
1990	36.3	34.3	40.1	48.1	56.0	67.7	73.0	73.5	63.7	58.6	46.5	39.5	53.1
1991	29.6	35.1	41.3	51.8	63.9	69.3	74.2	73.6	63.1	56.1	45.4	36.3	53.3
1992	31.4	33.0	36.6	46.5	57.6	67.3	70.3	70.1	64.0	51.7	43.0	34.2	50.5
1993	31.4	26.3	35.8	49.6	61.8	69.3	74.5	73.8	65.1	51.5	44.0	33.7	51.4
1994	22.7	25.8	38.8	51.4	56.5	69.4	76.2	69.9	63.0	54.2	48.5	38.4	51.2
1995	36.0	29.4	41.2	48.4	57.3	68.3	75.8	73.5	62.8	57.0	40.7	29.8	51.7
1996	28.7	29.6	35.0	48.3	57.4	68.1		71.0	64.1	52.1	40.0	38.6	
1997	29.3	36.5	37.8	47.1	55.4	68.1	73.7	70.6	64.0	51.8	41.0	34.2	50.8
1998	35.1	37.0	41.2	49.8	61.1	66.0	73.5	73.3	66.3	54.1	43.5	38.5	53.3
1999	30.2	34.8	39.9	50.0	59.8	70.5	76.6	72.0	66.5	52.4	47.4	36.8	53.1
2000	27.7	34.0	43.5	47.3	58.5	67.8	70.5	70.2	63.4	53.4	43.4	28.9	50.7
2001	29.0	31.9	36.3	49.1	60.1	70.5	69.9	74.3	64.9	54.2	47.6	39.3	52.3
2002	35.2	35.6	40.2	51.0	56.6	66.3	75.6	75.3	67.8	52.9	42.9	33.0	52.7
2003	25.1	26.2	38.3	45.4	55.2	65.3	73.5	74.9	66.3	51.8	46.6	36.1	50.4
2004	21.4	33.0	39.2	49.6	59.3	66.7	71.5	71.3	65.4	53.2	43.5	34.4	50.7
2005	27.5	31.3	34.8	50.0	53.4	69.7	74.3	76.5	68.3	55.3	45.8	32.4	51.6
2006	37.2	31.7	39.0	50.5	58.6	68.7	76.2	72.7	63.8	53.9	49.3	40.7	53.5
2007	34.1	27.1	38.1	46.8	60.8	68.3	73.8	73.2	67.5	59.6	42.8	32.8	52.1
2008	33.3	32.9	39.5	51.4	57.7	71.3	76.4	70.2	65.4	52.2	42.6	35.3	52.4
2009	24.2	32.9	37.7	49.9	58.7	64.5	70.4	73.9	63.1	52.0	49.0	33.0	50.8
2010	29.1	33.0	45.2	53.8	62.8	70.9	77.5	73.4	67.9	55.7	44.7	31.1	53.8
2011	26.2	29.7	38.8	50.0	59.4	67.4	76.1	73.2	67.6	55.3	48.3	39.2	52.6
POR= 64 YRS	28.8	30.6	38.1	48.5	58.0	67.4	73.1	71.7	64.1	53.5	44.1	33.5	50.9

HEATING DEGREE DAYS (base 65°F) 2011 PROVIDENCE (KPV D)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	1	26	78	363	518	809	1038	892	755	449	254	13	5196
1983-84	0	4	62	323	563	1001	1190	802	961	513	236	36	5691
1984-85	1	0	125	270	637	832	1309	914	743	417	177	63	5488
1985-86	0	6	78	321	567	1065	1045	999	772	460	216	57	5586
1986-87	14	25	113	380	697	911	1111	1014	772	494	228	23	5782
1987-88	2	25	70	414	653	921	1177	954	787	532	238	67	5840
1988-89	8	10	89	491	587	1003	960	975	847	557	181	22	5730
1989-90	2	9	89	332	668	1329	882	854	761	511	275	24	5736
1990-91	6	0	107	242	549	781	1090	829	726	400	121	29	4880
1991-92	1	0	125	275	581	884	1034	919	876	549	246	27	5517
1992-93	11	4	100	404	652	951	1036	1077	901	455	118	32	5741
1993-94	1	0	102	413	623	966	1307	1092	805	401	263	17	5990
1994-95	0	5	85	326	487	815	892	990	731	493	244	22	5090
1995-96	0	0	111	245	721	1082	1116	1018	921	494	265	18	5991
1996-97	0	4	83	389	743	814	1098	794	836	529	289	77	5656
1997-98	3	2	83	410	713	948	919	776	738	451	149	61	5253
1998-99	0	0	45	329	636	816	1072	837	773	441	172	14	5135
1999-00	1	5	43	384	519	866	1148	892	659	524	219	59	5319
2000-01	2	7	120	355	642	1115	1111	922	883	473	193	15	5838
2001-02	3	0	72	334	515	790	918	819	762	424	268	69	4974
2002-03	0	2	23	392	659	984	1231	1080	818	580	297	77	6143
2003-04	0	1	31	403	549	893	1345	921	796	457	197	52	5645
2004-05	2	4	57	358	639	943	1157	936	928	448	352	42	5866
2005-06	6	0	39	321	567	1004	856	928	797	427	217	38	5200
2006-07	0	5	77	342	467	748	948	1055	823	541	178	33	5217
2007-08	0	8	38	203	662	993	972	924	782	404	227	19	5232
2008-09	0	2	72	391	665	914	1256	890	840	457	208	63	5758
2009-10	6	3	91	396	474	988	1106	890	608	334	121	16	5033
2010-11	0	2	31	293	602	1043	1195	982	806	445	213	39	5651
2011-	0	0	42	304	495	794							

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COOLING DEGREE DAYS (base 65°F) 2011 PROVIDENCE (KPV D)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1982	0	0	0	0	11	64	276	165	59	3	2	0	580
1983	0	0	0	1	8	177	367	298	206	30	0	0	1087
1984	0	0	0	0	6	164	206	272	47	7	0	0	702
1985	0	0	0	5	34	65	256	203	90	5	0	0	658
1986	0	0	0	0	51	105	207	164	38	14	0	0	579
1987	0	0	0	0	57	130	231	177	53	0	0	0	648
1988	0	0	0	0	26	131	302	336	37	2	0	0	834
1989	0	0	0	0	10	141	237	237	103	0	0	0	728
1990	0	0	0	8	1	114	262	272	74	49	2	0	782
1991	0	0	0	12	96	166	295	276	73	8	0	0	926
1992	0	0	0	0	27	103	183	169	75	1	0	0	558
1993	0	0	0	0	26	167	303	281	110	1	1	0	889
1994	0	0	0	0	7	155	352	163	30	0	0	0	707
1995	0	0	0	0	12	128	344	272	53	4	0	0	813
1996	0	0	0	3	36	117		200	65	0	0	0	
1997	0	0	0	0	0	177	281	184	63	10	0	0	715
1998	0	0	8	0	36	96	270	266	93	0	0	0	769
1999	0	0	0	0	18	185	366	229	96	0	0	0	894
2000	0	0	0	0	27	147	179	173	77	1	0	0	604
2001	0	0	0	1	48	190	161	293	74	10	0	0	777
2002	0	0	0	14	16	118	335	327	112	24	0	0	946
2003	0	0	0	0	0	91	272	310	76	0	0	0	749
2004	0	0	0	0	24	111	212	205	76	0	0	0	628
2005	0	0	0	2	0	189	300	365	145	24	0	0	1025
2006	0	0	0	0	25	156	355	251	49	3	0	0	839
2007	0	0	0	0	54	140	280	272	120	42	0	0	908
2008	0	0	0	1	6	214	363	172	92	3	0	0	851
2009	0	0	0	10	21	55	181	286	38	0	0	0	591
2010	0	0	0	6	58	200	394	273	125	13	0	0	1069
2011	0	0	0	1	45	120	353	262	128	12	0	0	921

SNOWFALL (inches) 2011 PROVIDENCE (KPV D)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	0.0	0.0	0.0	0.0	0.0	7.3	3.8	21.3	T	T	0.0	0.0	32.4
1983-84	0.0	0.0	0.0	0.0	T	4.5	17.9	T	13.7	T	0.0	0.0	36.1
1984-85	0.0	0.0	0.0	0.0	T	2.0	9.8	10.0	0.6	T	0.0	0.0	22.4
1985-86	0.0	0.0	0.0	0.0	1.8	2.6	0.7	13.0	0.5	T	T	0.0	18.6
1986-87	0.0	0.0	0.0	0.0	4.4	8.0	21.5	4.7	1.6	1.1	0.0	0.0	41.3
1987-88	0.0	0.0	0.0	0.0	8.0	7.8	13.5	6.7	2.7	T	0.0	0.0	38.7
1988-89	0.0	0.0	0.0	0.0	T	1.2	0.2	7.3	1.9	0.3	0.0	0.0	10.9
1989-90	0.0	0.0	0.0	0.0	8.0	15.8	10.8	10.5	9.3	1.8	0.0	0.0	56.2
1990-91	0.0	0.0	0.0	0.0	T	6.9	6.4	6.0	5.3	0.0	0.0	0.0	24.6
1991-92	0.0	0.0	0.0	0.0	T	4.8	2.4	4.9	8.2	2.0	0.0	0.0	22.3
1992-93	0.0	0.0	0.0	T	T	3.6	5.4	12.7	17.8	0.2	0.0	0.0	39.7
1993-94	0.0	0.0	0.0	0.0	T	10.1	18.0	25.8	9.6	0.0	T	0.0	63.5
1994-95	0.0	0.0	0.0	0.0	0.7	0.3	3.0	8.4	T	0.1	0.0	0.0	12.5
1995-96	0.0	0.0	0.0	0.0	4.0		37.2						
1996-97													
1997-98					0.2		1.6	0.1	0.3	T			
1998-99							6.5	12.8	12.2	T			
1999-00							6.9	6.8	2.6				
2000-01							9.7	10.8	10.3	T	0.0	0.0	
2001-02	0.0	0.0	0.0	0.0	0.0	1.5	5.6	0.6	2.5	T	0.0	0.0	10.2
2002-03	0.0	0.0	0.0	0.0	5.8	12.0	3.9	24.7	7.8	2.1	0.0	0.0	56.3
2003-04	0.0	0.0	0.0	T	0.0	20.4	11.0	3.1	6.5	T	0.0	0.0	41.0
2004-05	0.0	0.0	0.0	0.0	3.8	7.9	36.7	13.9	9.9	0.0	0.0	0.0	72.2
2005-06	0.0	0.0	0.0	T	2.0	8.8	6.9	9.8	6.2	0.2	0.0	0.0	33.9
2006-07	0.0	0.0	0.0	0.0	0.0	0.8	1.2	7.3	5.8	T	0.0	T	15.1
2007-08	0.0	0.0	0.0	0.0	T	14.4	2.7	6.2	1.2	0.0	0.0	0.0	24.5
2008-09	0.0	0.0	0.0	0.0	T	20.6	14.9	3.9	11.6	0.0	0.0	0.0	51.0
2009-10	0.0	0.0	0.0	0.0	0.0	21.7	4.3	4.9	0.6	T	0.0	0.0	31.5
2010-11	0.0	0.0	0.0	0.0	0.1	10.2	30.7	8.5	3.7	T	0.0	0.0	53.2
2011-	0.0	0.0	0.0	2.3	T	T							
POR= 59 YRS	0.0	0.0	0.0	0.1	1.0	7.3	10.3	9.7	6.8	0.6	0.1	T	35.9

WBAN : 14765

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 PROVIDENCE RHODE ISLAND (KPVD)

The proximity to Narragansett Bay and the Atlantic Ocean plays an important part in determining the climate for Providence and vicinity. In winter, the temperatures are modified considerably, and many major snowstorms change to rain before reaching the area. In summer, many days that could be uncomfortably warm are cooled by refreshing sea breezes. At other times of the year, sea fog may be advected in over land by onshore winds. In fact, most cases of dense fog are produced this way, but the number of such days is few, averaging two or three days per month. In early fall, severe coastal storms of tropical origin sometimes bring destructive winds to this area. Even at other times of the year, it is usually coastal storms which produce the severest weather.

The temperature for the entire year averages around 50 degrees with 70 degree temperatures common from near the end of May to the latter part of September. During this period, there may be several days reaching 90 degrees or more. Temperatures of 100 degrees and more are rare.

Freezing temperatures occur on the average about 125 days per year. They become a common daily occurrence in the latter part of November, and become less frequent near the end of March. The average date for the last freeze in spring is mid-April, while the average date for the first freeze in fall is late October, making the growing season about 195 days in length. Sub-zero weather in winter seldom occurs, averaging less than one day for December and one or two days each for January and February.

Measurable precipitation occurs on about one day out of every three, and is fairly evenly distributed throughout the year. There is usually no definite dry season, but occasionally droughts do occur.

Thunderstorms are responsible for much of the rainfall from May through August. They usually produce heavy, and sometimes even excessive amounts of rainfall. However, since their duration is relatively short, damage is ordinarily light. The thunderstorms of summer are frequently accompanied by extremely gusty winds, which may result in some damage to property.

The first measurable snowfall of winter usually comes toward the end of November, and the last in spring is about the middle of March. Winters with over 50 inches of snow are not common. The area normally receives less than 25 inches. The month of greatest snowfall is usually February, but January and March are close seconds. It is unusual for the ground to remain well covered with snow for any long period of time.

Station History

PROVIDENCE, RI

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
PROVIDENCE T F GREEN AP	1948-01-01	1953-01-01	41° 43'	-71° 25'	66		AIRWAYS, COOP, USHCN
PROVIDENCE T F GREEN STATE AP	1981-12-31	1995-09-01	41° 43'	-71° 25'	51		COOP, USHCN
PROVIDENCE T F GREEN STATE AP	1973-01-01	1981-12-31	41° 43'	-71° 25'	51		COOP, USHCN, WXSVC
PROVIDENCE T F GREEN STATE AP	1995-09-01	2009-10-09	41° 43'	-71° 25'	51		ASOS, COOP, USHCN
GREEN THEODORE FRANCIS AP	1932-06-01	1932-06-16	41° 43'	-71° 25'			AIRWAYS
PROVIDENCE T F GREEN AP	1932-06-16	1948-01-01	41° 43'	-71° 25'			AIRWAYS
PROVIDENCE T F GREEN AP	1953-01-01	1959-01-01	41° 43'	-71° 25'	72		AIRWAYS, COOP, USHCN
PROVIDENCE T F GREEN STATE AP	1967-12-01	1973-01-01	41° 43'	-71° 25'	51		AIRWAYS, COOP, USHCN
PROVIDENCE T F GREEN STATE AP	2009-10-09	Present	41° 43'	-71° 25'	60		ASOS, COOP, USHCN
PROVIDENCE T F GREEN AP	1959-01-01	1967-12-01	41° 43'	-71° 25'	51		AIRWAYS, COOP, USHCN

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	2009-10-09	Present	DAILY	2400	ATEMP		
TEMP	1932-06-01	1970-10-01	DAILY	2400			
PRECIP	1970-10-01	1989-04-06	DAILY	2400	UNIV	RCRD	
PRECIP	1989-04-06	1995-07-01	HOURLY	2400			
PRECIP	1995-07-01	2009-10-09	DAILY	2400	UNIV	RCRD	
PRECIP	1970-10-01	1989-04-06	HOURLY	2400			
PRECIP	1989-04-06	1995-07-01	DAILY	2400	UNIV	RCRD	
TEMP	1989-04-06	1995-07-01	DAILY	2400	HYGR		
PRECIP	2009-10-09	Present	DAILY	2400	PCPNX		
TEMP	1970-10-01	1989-04-06	DAILY	2400			
TEMP	1995-07-01	2009-10-09	DAILY	2400	HYGR		
PRECIP	1995-07-01	2009-10-09	HOURLY	2400	UNIV	RCRD	
PRECIP	1932-06-01	1970-10-01	DAILY	2400	UNIV	RCRD	
PRECIP	2009-10-09	Present	HOURLY	2400	AWPAG	RCRD;HTD	

* 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>

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Email : ncdc.info@noaa.gov

NOAA/National Climatic Data Center

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151 Patton Avenue

Asheville, NC 28801-5001

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