

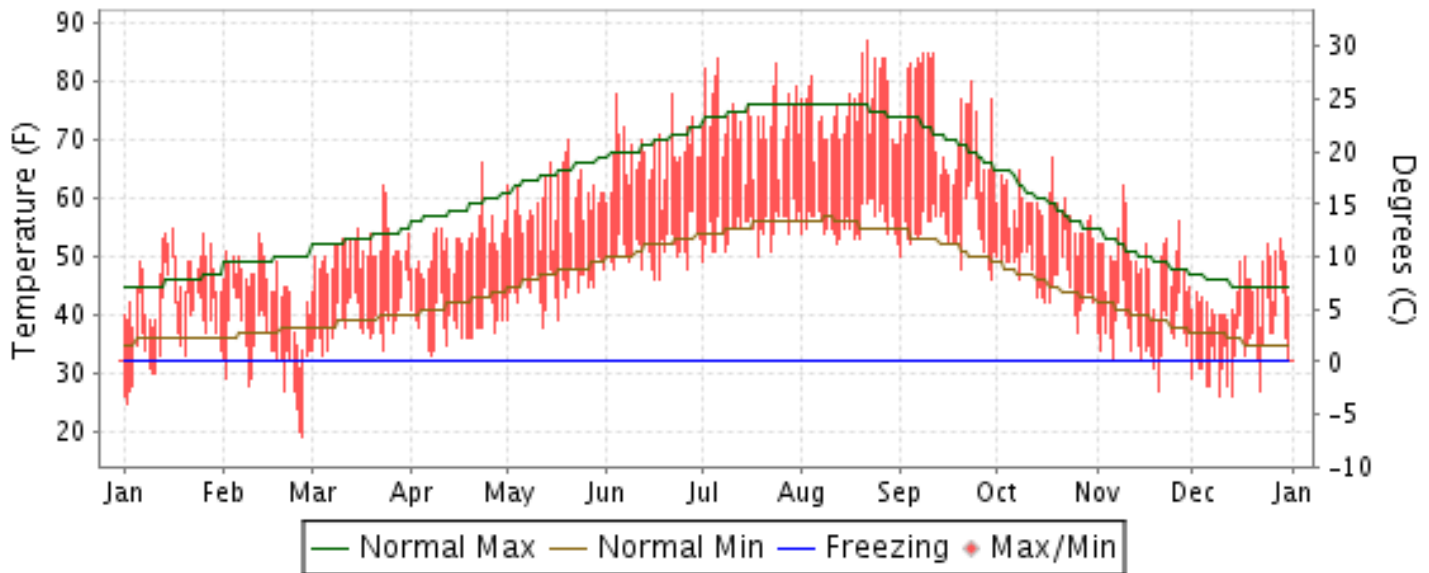


2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

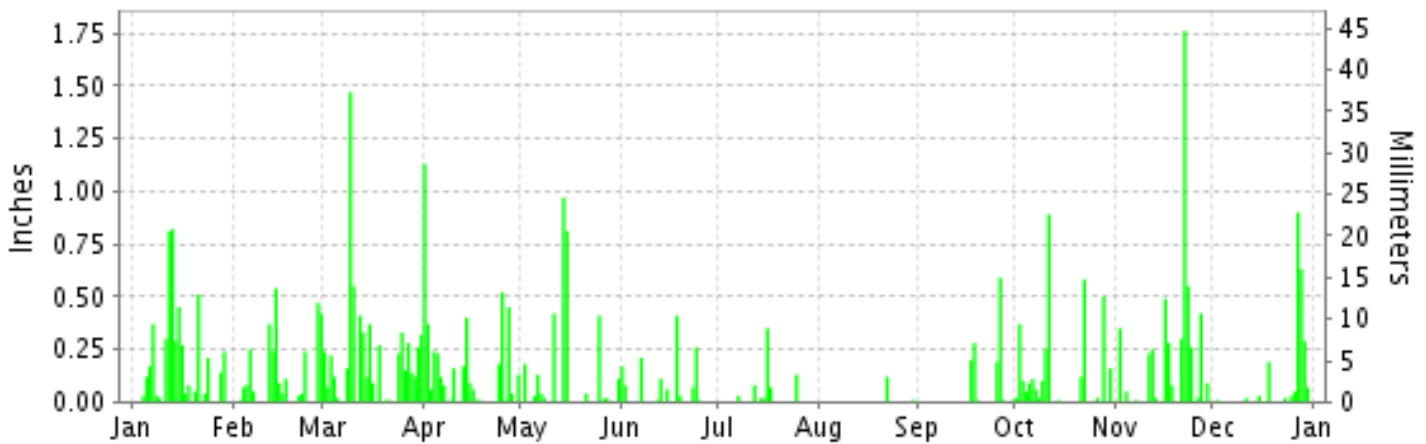
ISSN 0198-5442

SEATTLE, SEATTLE - TACOMA AIRPORT (KSEA)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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ENVIRONMENTAL SATELLITE, DATA
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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2011

SEATTLE (KSEA)

LATITUDE:
47° 26'N

LONGITUDE:
-122° 18'W

ELEVATION (FT):
GRND: 370 BARO: 434

TIME ZONE:
PACIFIC (UTC -8)

WBAN: 24233

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	46.2	45.0	51.4	52.2	59.7	67.6	73.6	75.8	73.5	58.0	49.3	44.3	58.1	
	HIGHEST DAILY MAXIMUM	55	54	62	66	70	78	84	87	85	67	62	53	87	
	DATE OF OCCURRENCE	16	12	23	23	20	21+	06	21	11+	18	09	28	AUG 21	
	MEAN DAILY MINIMUM	37.3	33.5	38.9	38.8	44.9	51.2	54.7	55.8	54.5	46.4	36.8	34.0	43.9	
	LOWEST DAILY MINIMUM	25	19	33	33	38	46	49	52	46	37	27	26	19	
	DATE OF OCCURRENCE	02	26	04	07	12	17+	01	31+	29	26	20	13+	FEB 26	
	AVERAGE DRY BULB	41.8	39.3	45.2	45.5	52.3	59.4	64.2	65.8	64.0	52.2	43.1	39.2	51.0	
	MEAN WET BULB	39.9	36.1	41.7	41.6	46.8	52.9	56.2	57.7	56.6	49.0	40.2	37.8	46.4	
	MEAN DEW POINT	36.6	31.1	37.5	36.9	41.5	48.2	50.4	52.0	51.4	46.4	36.6	35.2	42.0	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM <= 32°	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	MINIMUM <= 32°	7	12	0	0	0	0	0	0	0	0	4	14	37	
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	711	714	612	575	386	165	45	26	80	389	652	791	5146	
	COOLING DEGREE DAYS	0	0	0	0	0	2	27	60	59	0	0	0	148	
RH	MEAN (PERCENT)	83	75	77	75	70	71	66	65	68	83	79	85	75	
	HOUR 04 LST	87	81	83	86	82	86	82	83	83	91	84	88	85	
	HOUR 10 LST	83	70	73	70	67	65	63	61	62	78	75	84	71	
	HOUR 16 LST	79	70	71	63	58	57	51	46	51	75	75	82	65	
	HOUR 22 LST	84	78	80	79	73	77	73	72	73	86	81	85	78	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	3	1	0	0	1	0	1	0	0	5	4	10	25	
	THUNDERSTORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	
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.)	29.69	29.59	29.40	29.58	29.54	29.54	29.56	29.55	29.56	29.60	29.52	29.81	29.58	
	MEAN SEA-LEVEL PRESS. (IN.)	30.19	30.08	29.89	30.07	30.04	30.03	30.04	30.04	30.05	30.09	30.01	30.31	30.07	
WINDS	RESULTANT SPEED (MPH)	3.7	3.8	5.8	4.5	2.5	3.8	1.5	1.8	1.0	1.7	4.7	2.4	2.6	
	RES. DIR. (TENS OF DEGS.)	18	19	18	20	23	22	29	28	25	19	17	16	20	
	MEAN SPEED (MPH)	7.8	8.7	9.8	8.4	7.2	6.8	7.5	5.8	6.3	6.2	7.9	5.9	7.4	
	PREVAIL.DIR.(TENS OF DEGS.)	20	20	20	20	21	20	20	20	36	20	17	14	20	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	29	35	38	25	26	25	23	26	30	24	32	38	38	
	DIR. (TENS OF DEGS.)	21	19	21	20	22	22	21	21	20	19	23	19	19	
	DATE OF OCCURRENCE	16	12	10	14	26	13	19	02	25	11	17	25	DEC 25	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	40	46	55	36	32	32	31	32	43	30	46	53	55	
DIR. (TENS OF DEGS.)	20	20	20	16	22	22	22	22	21	21	23	20	20		
DATE OF OCCURRENCE	16	12	10	09	26	13	19	01	25	10	17	25	MAR 10		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	4.99	3.05	6.29	4.47	3.20	1.42	0.70	0.13	1.29	3.45	5.16	2.24	36.39	
	GREATEST 24-HOUR (IN.)	1.03	0.84	1.67	1.27	1.78	0.44	0.37	0.12	0.59	1.03	2.06	1.14	2.06	
	DATE OF OCCURRENCE	12-13	27-28	09-10	01-02	14-15	18-19	15-16	22	26	10-11	22-23	27-28	NOV 22-23	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	20	16	24	21	14	11	7	2	7	17	16	11	166		
PRECIPITATION 0.10	13	8	19	12	7	5	2	1	4	10	10	4	95		
PRECIPITATION 1.00	0	0	1	1	0	0	0	0	0	0	1	0	3		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	2.8	2.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	4.8	
	GREATEST 24-HOUR (IN.)	2.8	2.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	2.8	
	DATE OF OCCURRENCE	11	23		18							18		JAN 11	
	MAXIMUM SNOW DEPTH (IN.)	0	3	0	0	0	0	0	0	0	0	0	0	3	
	DATE OF OCCURRENCE		24											FEB 24	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	1	1	0	0	0	0	0	0	0	0	0	0	2		

NORMALS, MEANS, AND EXTREMES SEATTLE (KSEA)

LATITUDE: 47° 26'N **LONGITUDE:** -122° 18'W **ELEVATION (FT):** GRND: 370 BARO: 434 **TIME ZONE:** PACIFIC (UTC -8) **WBAN: 24233**

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	45.8	49.5	53.2	58.2	64.4	69.6	75.3	75.6	70.2	59.7	50.5	45.5	59.8
	MEAN DAILY MAXIMUM	64	45.0	48.9	52.1	57.3	64.0	69.4	74.1	74.8	69.5	59.2	50.4	45.4	59.2
	HIGHEST DAILY MAXIMUM	67	64	70	78	85	93	96	103	99	98	89	74	64	103
	YEAR OF OCCURRENCE		1981	1968	2004	1976	1963	1995	2009	1981	1988	1987	2010	1993	JUL 2009
	MEAN OF EXTREME MAXS.	64	55.5	59.5	64.4	73.0	81.1	85.1	89.7	88.2	84.2	72.6	61.1	55.7	72.5
	NORMAL DAILY MINIMUM	30	35.9	37.2	39.1	42.1	47.2	51.7	55.3	55.7	51.9	45.7	39.9	35.9	44.8
	MEAN DAILY MINIMUM	64	35.1	36.6	38.1	41.2	46.5	51.4	54.0	55.0	51.5	45.4	39.6	35.9	44.2
	LOWEST DAILY MINIMUM	67	0	1	11	29	28	38	43	44	35	28	6	6	0
	YEAR OF OCCURRENCE		1950	1950	1955	1975	1954	1952	1954	1955	1972	1949	1955	1968	JAN 1950
	MEAN OF EXTREME MINS.	64	22.6	25.7	29.5	33.8	38.5	45.3	49.3	49.4	43.4	34.9	28.0	24.0	35.4
	NORMAL DRY BULB	30	40.9	43.3	46.2	50.2	55.8	60.7	65.3	65.6	61.1	52.7	45.2	40.7	52.3
	MEAN DRY BULB	64	40.1	42.8	45.1	49.3	55.3	60.4	64.1	64.9	60.5	52.4	45.0	40.7	51.7
	MEAN WET BULB	28	38.5	38.6	41.4	44.2	48.8	52.9	56.5	57.1	54.2	48.2	41.9	37.5	46.7
	MEAN DEW POINT	28	36.7	36.0	39.1	41.7	46.4	50.2	53.7	54.3	51.8	46.5	40.4	35.8	44.4
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.1	0.4	1.2	1.1	0.3	0.0	0.0	0.0	3.1
	MAXIMUM <= 32	30	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	2.4
	MINIMUM <= 32	30	8.8	6.0	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.2	3.4	8.8	29.7
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	747	613	582	447	291	150	55	45	138	383	592	754	4797
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	5	19	65	65	19	0	0	0	173
RH	NORMAL (PERCENT)	30	81	77	76	73	72	70	68	68	73	80	82	82	75
	HOURLY 04 LST	30	85	83	86	85	86	85	83	84	88	89	86	85	85
	HOURLY 10 LST	30	82	78	76	72	70	69	67	67	72	79	81	83	75
	HOURLY 16 LST	30	75	68	62	58	56	55	50	48	54	66	76	79	62
	HOURLY 22 LST	30	81	78	78	76	75	74	70	70	76	82	83	82	77
S	PERCENT POSSIBLE SUNSHINE	30	28	40	50	52	56	56	64	65	62	43	28	23	47
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	48	4.5	2.8	1.5	0.8	0.4	0.4	0.7	1.5	2.9	5.3	3.8	5.0	29.6
	THUNDERSTORMS	64	0.2	0.3	0.6	0.8	0.8	0.6	0.7	0.7	0.6	0.3	0.6	0.3	6.5
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	52	6.7	6.5	6.3	6.2	5.7	5.6	4.2	4.5	4.8	5.9	6.6	6.7	5.8
	MIDNIGHT-MIDNIGHT (OKTAS)	32	6.6	6.1	5.8	5.9	5.5	5.3	4.1	4.2	4.4	5.3	6.3	6.4	5.5
	MEAN NO. DAYS WITH: CLEAR	52	2.8	3.0	3.4	2.7	4.4	5.1	10.2	9.0	8.1	4.0	2.5	2.3	57.5
	PARTLY CLOUDY	52	3.9	4.2	5.8	7.3	8.8	7.9	9.5	9.7	8.5	7.4	4.2	3.9	81.1
	CLOUDY	52	24.3	21.1	21.9	20.0	17.7	16.9	10.5	11.9	13.0	19.5	23.3	24.9	225.0
PR	MEAN STATION PRESSURE(IN)	28	29.53	29.55	29.54	29.55	29.55	29.56	29.57	29.55	29.55	29.58	29.54	29.57	29.55
	MEAN SEA-LEVEL PRES. (IN)	28	30.06	30.04	30.03	30.04	30.03	30.04	30.05	30.03	30.03	30.06	30.04	30.06	30.04
WINDS	MEAN SPEED (MPH)	28	8.6	8.5	8.6	8.2	7.9	7.8	7.5	7.1	7.0	7.4	8.5	8.5	8.0
	PREVAIL.DIR.(TENS OF DEGS)	45	20	20	20	22	22	22	22	22	01	20	20	19	22
	MAXIMUM 2-MINUTE: SPEED (MPH)	15	40	39	44	37	30	36	23	26	36	39	37	52	52
	DIR. (TENS OF DEGS)		20	21	19	19	21	23	21	21	20	22	20	22	22
	YEAR OF OCCURRENCE		2000	2008	1999	2010	2010	2008	2011	2011	1999	2007	1998	2006	DEC 2006
	MAXIMUM 3-SECOND SPEED (MPH)	15	52	53	60	47	40	46	31	35	43	53	49	69	69
	DIR. (TENS OF DEGS)		20	22	18	18	22	23	22	33	21	22	23	22	22
YEAR OF OCCURRENCE		2000	2008	1999	2010	2005	2008	2011	2010	2011	2007	2010	2006	DEC 2006	
PRECIPITATION	NORMAL (IN)	30	5.13	4.18	3.75	2.59	1.78	1.49	0.79	1.02	1.63	3.19	5.90	5.62	37.07
	MAXIMUM MONTHLY (IN)	67	12.92	9.11	8.40	6.53	4.76	3.90	2.39	4.59	5.95	8.96	15.63	11.85	15.63
	YEAR OF OCCURRENCE		1953	1961	1950	1991	1948	1946	1983	1975	1978	2003	2006	1979	NOV 2006
	MINIMUM MONTHLY (IN)	67	0.58	0.35	0.57	0.33	0.12	0.13	T	0.01	T	0.31	0.74	1.37	0.01
	YEAR OF OCCURRENCE		1985	1993	1965	1956	1992	1951	1960	1974	1991	1987	1976	1978	AUG 1974
	MAXIMUM IN 24 HOURS (IN)	67	3.22	3.41	2.86	3.32	1.83	2.21	0.85	1.75	2.23	5.02	3.78	4.18	5.02
	YEAR OF OCCURRENCE		1986	1951	1972	1991	1969	2008	1981	1968	1978	2003	2006	2007	OCT 2003
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	17.8	15.6	16.4	13.6	11.6	8.5	5.3	5.5	8.3	11.7	17.9	17.8	150.0
PRECIPITATION >= 1.00	30	0.7	0.4	0.3	0.2	*	0.1	0.0	0.1	0.1	0.4	1.0	1.2	4.5	
SNOWFALL	NORMAL (IN)	30	2.4	1.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.1	2.5	8.1
	MAXIMUM MONTHLY (IN)	55	57.2	13.1	18.2	2.3	T	0.0	T	0.0	T	2.0	17.5	22.1	57.2
	YEAR OF OCCURRENCE		1950	1949	1951	1972	1993		1980		1972	1971	1985	1968	JAN 1950
	MAXIMUM IN 24 HOURS (IN)	55	21.4	9.8	7.4	2.3	T	0.0	T	0.0	T	2.0	9.4	13.0	21.4
	YEAR OF OCCURRENCE'		1950	1990	1989	1972	1993		1980		1972	1971	1946	1968	JAN 1950
	MAXIMUM SNOW DEPTH (IN)	50	21	11	7	2	0	0	0	0	0	2	8	10	21
	YEAR OF OCCURRENCE		1969	1969	1989	1972						1971	1985	1974	JAN 1969
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.9	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	2.6	

PRECIPITATION (inches) 2011 SEATTLE (KSEA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	5.35	7.57	3.73	2.07	0.63	1.03	0.59	0.62	1.49	4.07	5.31	6.86	39.32
1983	7.07	4.57	3.81	1.06	2.10	1.85	2.39	1.90	1.85	1.34	7.97	5.02	40.93
1984	3.62	3.91	3.91	2.87	3.38	2.81	0.17	0.13	1.01	2.14	8.09	4.95	36.99
1985	0.58	2.63	2.56	1.30	0.85	2.80	0.10	0.55	1.98	5.74	4.26	1.78	25.13
1986	8.54	4.41	2.67	1.38	1.71	0.68	1.10	0.10	1.89	4.21	7.98	3.67	38.34
1987	5.98	2.05	5.53	2.61	2.38	0.16	0.39	0.29	0.91	0.31	3.21	6.11	29.93
1988	4.07	0.71	3.75	3.20	3.01	1.56	0.50	0.28	1.75	2.24	8.43	3.48	32.98
1989	2.78	3.43	5.79	2.80	2.78	1.14	0.64	0.89	0.54	2.98	6.13	4.79	34.69
1990	9.41	3.72	2.58	2.54	1.98	3.05	0.58	0.71	0.05	5.79	10.71	3.63	44.75
1991	4.46	4.69	4.66	6.53	1.39	1.29	0.28	2.17	T	1.31	5.33	3.31	35.42
1992	7.82	3.09	1.68	4.12	0.12	1.14	0.89	0.66	1.15	2.45	5.57	4.09	32.78
1993	4.09	0.35	4.80	4.54	2.86	2.48	1.27	0.16	0.03	1.54	2.20	4.48	28.80
1994	2.51	4.47	3.17	2.27	1.43	1.25	0.28	0.30	1.69	3.51	5.79	8.15	34.82
1995	4.48	4.97	4.07	2.05	0.81	1.46	1.34	1.81	0.91	3.93	10.40	6.37	42.60
1996	7.34	8.35	2.06	5.37	2.07	0.59	.77	1.32	1.85	5.54	5.23	10.18	50.67
1997	7.02	1.99	8.15	4.32	1.87	1.64	1.20	1.27	3.41	5.83	3.93	2.63	43.26
1998	7.15	3.31	3.96	0.99	1.98	1.11	0.41	0.35	0.72	3.48	11.62	8.98	44.06
1999	6.84	6.95	3.66	1.49	2.12	1.86	1.18	0.92	0.17	2.26	9.60	5.06	42.11
2000	3.77	5.25	2.82	1.48	3.27	1.61	0.23	0.33	1.12	3.00	3.27	2.51	28.66
2001	2.70	2.07	2.73	3.16	1.39	3.05	1.03	2.32	0.83	3.13	9.26	5.89	37.56
2002	5.98	4.17	2.82	4.29	1.11	1.73	0.64	0.04	0.42	0.67	3.51	5.98	31.36
2003	8.39	1.76	6.34	2.74	1.16	0.51	0.06	0.32	0.89	8.96	6.77	3.88	41.78
2004	6.36	2.44	2.14	0.65	2.51	0.71	0.16	3.00	2.80	2.80	3.16	4.37	31.10
2005	4.44	1.20	3.71	3.68	3.32	1.63	1.03	0.29	0.75	3.02	5.52	6.85	35.44
2006	11.65	2.55	2.18	2.73	1.65	1.67	0.06	0.02	1.43	1.55	15.63	7.30	48.42
2007	6.22	3.38	4.42	0.69	1.46	1.34	1.44	0.73	3.16	3.32	3.71	9.08	38.95
2008	4.26	1.47	3.65	1.90	0.89	1.64	0.48	2.87	0.78	2.17	6.52	4.10	30.73
2009	5.40	1.51	4.16	3.36	3.61	0.18	0.06	1.16	1.75	5.54	8.96	2.75	38.44
2010	6.17	3.52	3.76	3.49	2.83	2.49	0.31	0.64	4.80	5.24	5.05	8.69	46.99
2011	4.99	3.05	6.29	4.47	3.20	1.42	0.70	0.13	1.29	3.45	5.16	2.24	36.39
POR= 64 YRS	5.74	3.93	3.77	2.59	1.81	1.46	0.73	1.08	1.77	3.51	6.11	5.80	38.30

WBAN : 24233

AVERAGE TEMPERATURE (°F) 2011 SEATTLE (KSEA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	39.3	42.1	44.1	47.4	54.7	63.1	62.8	65.1	60.6	52.7	43.2	40.8	51.3
1983	45.0	46.9	49.4	50.7	57.7	59.9	63.3	65.6	58.3	51.7	47.8	36.1	52.7
1984	43.2	44.8	48.5	48.7	52.9	58.8	65.0	64.9	59.9	49.7	44.6	36.8	51.5
1985	37.1	39.0	43.3	49.2	54.8	60.0	68.6	65.2	58.1	51.4	35.8	36.2	49.9
1986	44.9	42.8	49.2	48.1	55.7	62.7	61.7	68.4	59.1	54.3	45.3	42.0	52.9
1987	40.5	46.3	48.9	52.0	56.9	62.6	64.2	66.1	62.6	55.8	48.5	39.2	53.6
1988	40.1	44.4	45.6	50.3	54.9	59.6	65.3	65.4	60.5	55.4	45.4	41.9	52.4
1989	40.5	35.9	43.7	53.4	56.0	63.2	64.5	65.3	64.1	53.1	47.0	42.9	52.5
1990	42.5	40.0	47.1	52.1	54.7	59.8	68.0	67.3	63.4	51.2	46.6	35.3	52.3
1991	40.0	47.7	44.1	49.1	54.3	58.9	66.8	66.6	62.9	52.9	47.3	43.7	52.9
1992	43.9	47.3	50.3	53.1	59.8	65.0	66.7	66.8	60.0	54.4	45.5	38.8	54.3
1993	37.9	42.3	48.1	50.6	59.6	60.6	61.2	65.5	61.9	55.4	42.0	41.4	52.2
1994	44.9	40.4	48.5	52.3	58.2	60.6	67.9	67.3	64.4	52.8	42.4	41.7	53.5
1995	46.4	45.9	47.8	51.8	60.1	62.7	67.0	63.0	64.0	52.5	49.1	42.4	54.4
1996	39.7	43.2	47.2	51.5	53.1	60.5	67.9	66.5	59.2	51.1	43.1	39.3	51.9
1997	41.1	41.9	44.8	49.2	58.2	59.5	64.5	67.7	62.2	51.3	48.4	41.5	52.5
1998	42.2	45.8	46.6	50.4	54.9	59.9	67.6	66.8	63.1	52.6	46.7	39.9	53.0
1999	42.0	42.5	44.3	48.5	51.8	58.2	62.4	64.8	60.8	52.2	47.9	42.0	51.5
2000	40.3	43.7	44.5	50.9	53.8	60.6	64.3	63.5	60.2	52.8	42.5	40.8	51.5
2001	42.0	40.7	45.4	48.0	55.4	57.6	62.5	64.8	59.8	50.9	46.7	41.5	51.3
2002	40.7	41.9	41.9	48.8	53.1	61.1	65.0	65.2	60.6	51.4	47.1	43.0	51.7
2003	45.8	41.7	46.8	48.9	54.8	62.8	67.9	66.4	62.6	54.3	42.8	41.8	53.1
2004	40.3	44.5	47.6	53.3	57.0	63.4	68.2	67.1	58.8	53.3	45.0	42.5	53.4
2005	42.1	42.6	49.1	50.8	58.2	59.9	65.6	66.8	59.5	54.0	42.9	42.7	52.9
2006	46.6	42.9	45.5	50.3	56.8	63.1	67.5	65.9	62.3	52.3	44.2	40.6	53.2
2007	38.0	43.6	47.1	50.6	56.6	60.3	67.8	65.6	60.0	50.6	44.3	39.8	52.0
2008	38.7	43.9	43.5	47.0	56.1	58.4	64.9	65.9	61.0	51.7	49.2	36.9	51.4
2009	39.1	41.7	41.7	49.2	56.3	63.8	69.5	65.6	62.4	52.2	46.7	37.9	52.2
2010	47.0	46.8	47.1	49.5	53.2	58.3	64.6	65.4	60.9	53.3	43.2	43.2	52.7
2011	41.8	39.3	45.2	45.5	52.3	59.4	64.2	65.8	64.0	52.2	43.1	39.2	51.0
POR= 64 YRS	40.1	42.8	45.2	49.3	55.3	60.4	64.1	64.9	60.5	52.4	45.0	40.7	51.7

HEATING DEGREE DAYS (base 65°F) 2011 SEATTLE (KSEA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	93	42	141	373	647	745	613	502	479	422	244	149	4450
1983-84	72	19	196	406	511	890	672	577	507	482	372	183	4887
1984-85	54	42	159	467	603	867	857	719	666	469	310	160	5373
1985-86	8	48	199	413	870	888	618	616	479	502	305	90	5036
1986-87	105	12	196	323	586	707	754	522	491	384	253	105	4438
1987-88	58	37	102	284	485	792	767	590	593	435	316	165	4624
1988-89	60	38	162	291	583	708	749	807	654	340	273	93	4758
1989-90	41	29	68	362	534	677	689	696	547	379	312	158	4492
1990-91	29	23	61	420	546	913	767	475	639	472	322	179	4846
1991-92	24	40	90	368	526	654	645	507	447	351	171	63	3886
1992-93	26	22	151	322	580	805	834	629	517	427	170	135	4618
1993-94	113	48	120	290	685	723	618	682	503	373	209	132	4496
1994-95	23	5	43	369	671	713	570	527	527	390	160	118	4116
1995-96	19	77	60	382	471	693	779	630	543	399	362	135	4550
1996-97	42	32	167	422	649	793	732	640	622	468	211	159	4937
1997-98	38	11	95	416	489	718	700	533	562	433	307	152	4454
1998-99	21	21	79	376	543	771	706	623	634	487	400	218	4879
1999-00	101	42	141	393	504	706	760	611	628	415	340	154	4795
2000-01	60	65	146	373	668	745	707	675	599	504	305	218	5065
2001-02	86	44	150	430	547	723	746	640	709	481	363	143	5062
2002-03	55	46	134	412	533	675	590	648	556	478	308	117	4552
2003-04	16	11	108	326	656	713	757	589	530	344	243	97	4390
2004-05	23	19	177	355	596	691	702	622	487	419	219	150	4460
2005-06	34	17	161	336	655	687	565	612	596	433	255	91	4442
2006-07	33	31	110	388	616	752	833	589	545	423	267	146	4733
2007-08	6	24	164	440	613	773	808	601	659	532	281	226	5127
2008-09	42	53	123	405	468	864	797	649	714	465	273	70	4923
2009-10	29	36	99	385	545	835	552	502	552	456	359	196	4546
2010-11	76	61	124	354	648	669	711	714	612	575	386	165	5095
2011-	45	26	80	389	652	791							

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COOLING DEGREE DAYS (base 65°F) 2011 SEATTLE (KSEA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1982	0	0	0	0	0	53	31	55	15	0	0	0	154
1983	0	0	0	0	24	2	24	44	0	0	0	0	94
1984	0	0	0	0	1	5	62	45	11	0	0	0	124
1985	0	0	0	0	3	17	125	59	0	0	0	0	204
1986	0	0	0	0	22	27	10	124	26	0	0	0	209
1987	0	0	0	0	11	42	39	80	35	5	0	0	212
1988	0	0	0	0	7	10	79	56	36	1	0	0	189
1989	0	0	0	0	2	47	32	45	46	0	0	0	172
1990	0	0	0	0	0	10	129	100	21	0	0	0	260
1991	0	0	0	0	0	0	85	96	34	0	0	0	215
1992	0	0	0	0	18	68	83	85	8	0	0	0	262
1993	0	0	0	0	10	8	1	72	32	0	0	0	123
1994	0	0	0	0	1	5	120	86	29	0	0	0	241
1995	0	0	0	0	15	55	88	20	34	0	0	0	212
1996	0	0	0	1	0	2	137	81	1	0	0	0	222
1997	0	0	0	0	4	0	29	100	17	0	0	0	150
1998	0	0	0	2	1	6	108	84	29	0	0	0	230
1999	0	0	0	0	0	18	29	43	22	0	0	0	112
2000	0	0	0	0	0	28	44	27	8	0	0	0	107
2001	0	0	0	0	11	3	14	44	0	0	0	0	72
2002	0	0	0	0	0	33	63	59	7	0	0	0	162
2003	0	0	0	0	1	56	111	63	42	0	0	0	273
2004	0	0	0	0	0	53	129	91	0	0	0	0	273
2005	0	0	0	0	17	5	58	78	4	0	0	0	162
2006	0	0	0	0	8	42	118	67	35	0	0	0	270
2007	0	0	0	0	11	13	99	50	19	0	0	0	192
2008	0	0	0	0	14	36	47	88	8	0	0	0	193
2009	0	0	0	0	7	41	174	64	28	0	0	0	314
2010	0	0	0	0	0	2	71	81	8	0	0	0	162
2011	0	0	0	0	0	2	27	60	59	0	0	0	148

SNOWFALL (inches) 2011 SEATTLE (KSEA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1983-84	0.0	0.0	0.0	0.0	T	0.3	T	0.0	0.0	T	0.0	0.0	0.3
1984-85	0.0	0.0	0.0	T	T	2.4	T	5.7	T	T	0.0	0.0	8.1
1985-86	0.0	0.0	0.0	T	17.5	1.7	0.0	1.1	0.0	T	0.0	0.0	20.3
1986-87	0.0	0.0	0.0	0.0	T	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
1987-88	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T	0.0	0.0	0.0	T
1988-89	0.0	0.0	0.0	0.0	T	T	1.0	5.8	7.4	T	T	0.0	14.2
1989-90	0.0	0.0	0.0	0.0	0.0	0.0	T	9.8	T	0.0	T	0.0	9.8
1990-91	0.0	0.0	0.0	0.0	0.0	3.8	0.4	0.0	2.5	T	0.0	0.0	6.7
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	T	6.7	1.3	1.4	0.0	0.0	T	0.0	9.4
1993-94	0.0	0.0	0.0	0.0	T	0.0	0.0	2.1	0.2	0.0	0.0	0.0	2.3
1994-95	0.0	0.0	0.0	0.0	T	1.9	0.0	0.2	T	0.0	0.0	0.0	2.1
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.5	0.0	0.0	0.0	0.0	11.0
1996-97	0.0	0.0	0.0										
1997-98													
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-06													
2006-07													
2007-08													
2008-09						13.9	3.9	2.5	3.0	T	0.0	0.0	
2009-10	0.0	0.0	0.0	0.0	T	T	0.0	0.0	T	0.0	0.0	0.0	T
2010-11	0.0	0.0	0.0	0.0	2.5	0.5	2.8	2.0	0.0	T	0.0	0.0	7.8
2011-	0.0	0.0	0.0	0.0	T	0.0							
POR= 65 YRS	0.0	0.0	0.0	T	0.7	2.2	4.0	1.4	1.1	T	T	0.0	9.4

WBAN : 24233

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

SEATTLE

SEATTLE - TACOMA AIRPORT (KSEA)

The Seattle-Tacoma International Airport is located 6 miles south of the Seattle city limits and 14 miles north of Tacoma. It is situated on a low ridge lying between Puget Sound on the west and the Green River valley on the east with terrain sloping moderately to the shores of Puget Sound some 2 miles to the west. The Olympic Mountains, rising sharply from Puget Sound, are about 50 miles to the northwest. Rather steep bluffs border the Green River Valley about 2.5 miles to the east and the foothills of the Cascade Range begin 10 to 15 miles to the east of the airport.

The mild climate of the Pacific Coast is modified by the Cascade Mountains and, to a lesser extent, by the Olympic Mountains. The climate is characterized by mild temperatures, a pronounced though not sharply defined rainy season, and considerable cloudiness, particularly during the winter months. The Cascades are very effective in shielding the Seattle-Tacoma area from the cold, dry continental air during the winter and the hot, dry continental air during the summer months. The extremes of temperature that occur in western Washington are the result of the occasional pressure distributions that force the continental air into the Puget Sound area. But the prevailing southwesterly circulation keeps the average winter daytime temperatures in the 40s and the nighttime readings in the 30s. During the summer, daytime temperatures are usually in the 70s with nighttime lows in the 50s. Extremes of temperatures, both in the winter and summer, are usually of short duration. The dry season is centered around July and early August with July being the driest month of the year. The rainy season extends from October to March with December normally the wettest month, however, precipitation is rather evenly distributed through the winter and early spring months with more than 75 percent of the yearly precipitation falling during the winter wet season. Most of the rainfall in the Seattle area comes from storms common to the middle latitudes. These disturbances are most vigorous during the winter as they move through western Washington. The storm track shifts to the north during the summer and those that reach the State are not the wind and rain producers of the winter months. Local summer afternoon showers and a few thunderstorms occur in the Seattle-Tacoma area but they do not contribute materially to the precipitation.

The occurrence of snow in the Seattle-Tacoma area is extremely variable and usually melts before accumulating measurable depths. There are winters on record with only a trace of snow, but at the other extreme, over 21 inches has fallen in a 24-hour period. Usually, winter storms do not produce snow unless the storm moves in such a way to bring cold air out of Canada directly or with only a short over water trajectory.

The highest winds recorded in the Seattle-Tacoma area were associated with strong storms crossing the state from the southwest. Prevailing winds are from the southwest but occasional severe winter storms will produce strong northerly winds. Winds during the summer months are relatively light with occasional land-sea breeze effects creating afternoon northerly winds of 8 to 15 miles an hour. Fog or low clouds that form over the southern Puget Sound area in the late summer, fall, and early winter months, often dominate the weather conditions during the late night and early morning hours with visibilities occasionally lower for a few hours near sunrise. Most of the summer clouds form along the coast and move into the Seattle area from the southwest.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is November 11 and the average last occurrence in the spring is March 24.

Station History

SEATTLE, WA

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
SEATTLE TACOMA AP	1944-11-21	1948-01-01	47° 25'	-122° 18'			AIRWAYS
SEATTLE TACOMA INTL AP	1996-10-01	2002-04-02	47° 27'	-122° 18'	400	.5 MI W	ASOS, COOP
SEATTLE TACOMA INTL AP	2011-03-07	Present	47° 26'	-122° 18'	370		ASOS, COOP
SEATTLE TACOMA AP	1948-01-01	1949-01-01	47° 25'	-122° 18'	384		AIRWAYS, COOP
SEATTLE TACOMA INTL AP	2002-04-02	2011-03-07	47° 26'	-122° 18'	370		ASOS, COOP
TACOMA	1944-11-01	1944-11-21	47° 25'	-122° 18'			AIRWAYS
SEATTLE TACOMA AP	1973-01-01	1981-02-01	47° 27'	-122° 18'	400		COOP, WXSVC
SEATTLE TACOMA AP	1949-01-01	1950-01-01	47° 27'	-122° 18'	384		AIRWAYS, COOP
SEATTLE TACOMA INTL AP	1981-02-01	1981-12-31	47° 27'	-122° 18'	400		COOP, WXSVC
SEATTLE TACOMA INTL AP	1981-12-31	1996-10-01	47° 27'	-122° 18'	400		COOP
SEATTLE TACOMA AP	1950-01-01	1973-01-01	47° 27'	-122° 18'	400		AIRWAYS, COOP

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1982-01-01	1995-07-01	HOURLY	2400			
PRECIP	1982-01-01	1995-07-01	DAILY	2400	UNIV	RCRD	ROOF
PRECIP	1996-10-01	1999-12-01	HOURLY	2400	UNIV	RCRD	ROOF
PRECIP	1996-10-01	2002-04-02	DAILY	2400	TB	RCRD	
TEMP	1996-10-01	2002-04-02	DAILY	2400	HYGR		
PRECIP	2011-03-07	Present	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	2002-04-02	2011-03-07	HOURLY	2400	TB	RCRD	
TEMP	2011-03-07	Present	DAILY	2400	ATEMP		
PRECIP	2011-03-07	Present	DAILY	2400	PCPNX		
PRECIP	1995-07-01	1996-10-01	HOURLY	2400	UNIV	RCRD	ROOF
TEMP	1995-07-01	1996-10-01	DAILY	2400	HYGR		
TEMP	2002-04-02	2011-03-07	DAILY	2400	ATEMP		
PRECIP	1944-11-01	1982-01-01	DAILY	2400	UNIV	RCRD	ROOF
PRECIP	1995-07-01	1996-10-01	DAILY	2400	UNIV	RCRD	ROOF
PRECIP	1996-10-01	2002-04-02	HOURLY	2400	TB	RCRD	
TEMP	1944-11-01	1982-01-01	DAILY	2400	HYGR		
TEMP	1982-01-01	1995-07-01	DAILY	2400	HYGR		
PRECIP	2002-04-02	2011-03-07	DAILY	2400	TB	RCRD	

* 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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151 Patton Avenue

Asheville, NC 28801-5001

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