

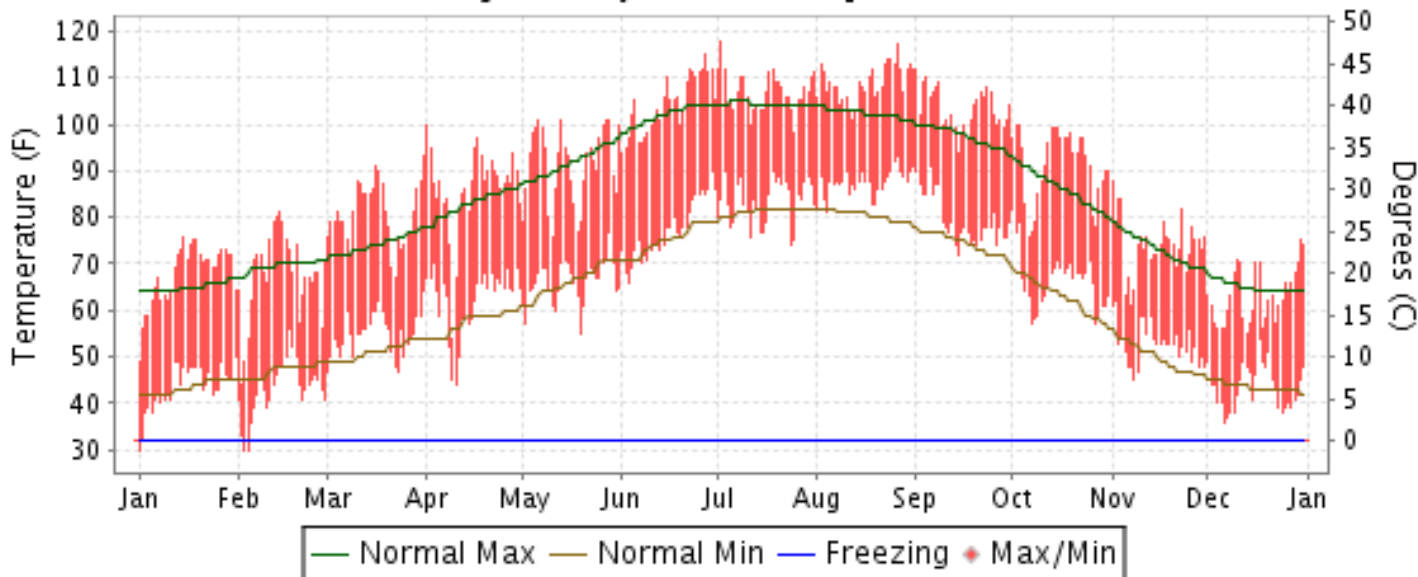


2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

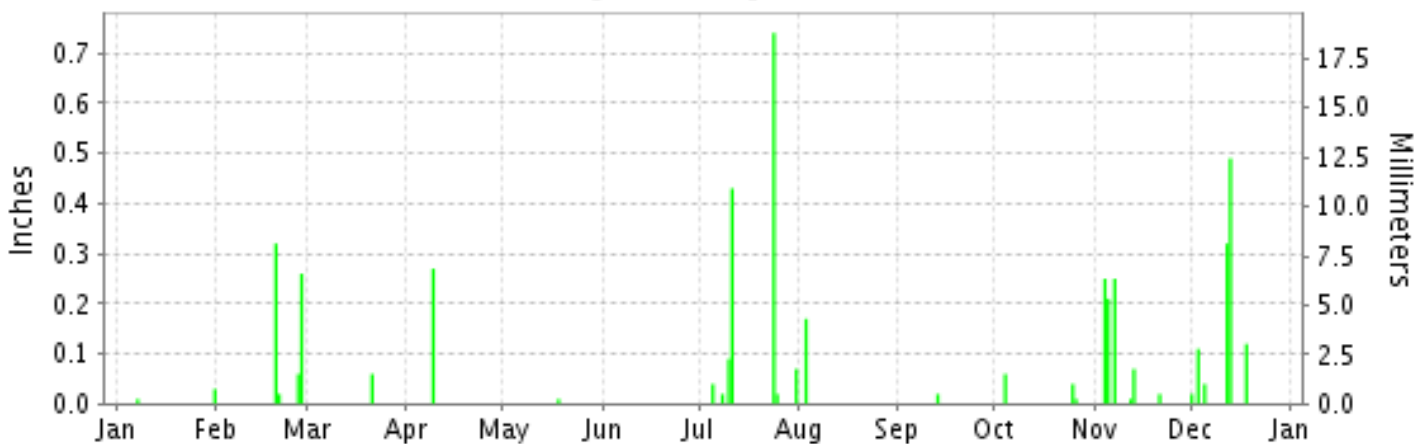
ISSN 0198-0572

PHOENIX, ARIZONA (KPHX)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2011

PHOENIX (KPHX)

LATITUDE: 33° 25'N LONGITUDE: -112° 0'W ELEVATION (FT): GRND: 1107 BARO: 1106 TIME ZONE: MOUNTAIN (UTC -7) WBAN: 23183

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	67.8	67.4	80.8	86.3	91.5	104.3	106.9	109.0	103.3	91.3	74.1	63.0	87.1	
	HIGHEST DAILY MAXIMUM	76	81	93	100	101	115	118	117	112	100	88	75	118	
	DATE OF OCCURRENCE	15	14	31	01	28+	27	02	26	01	03+	01	30	JUL 02	
	MEAN DAILY MINIMUM	43.5	43.0	54.9	62.2	66.1	77.3	83.5	87.5	79.5	66.3	52.8	43.4	63.3	
	LOWEST DAILY MINIMUM	30	30	47	44	55	66	74	81	72	57	45	36	30	
	DATE OF OCCURRENCE	01	04+	23+	10	19	03	24	04	14	27+	08	06	FEB 04+	
	AVERAGE DRY BULB	55.7	55.2	67.9	74.3	78.8	90.8	95.2	98.3	91.4	78.8	63.5	53.2	75.3	
	MEAN WET BULB	42.9	41.7	49.7	52.4	53.8	59.5	69.2	70.7	65.0	56.7	50.3	44.2	54.7	
	MEAN DEW POINT	26.5	20.5	27.8	27.0	24.8	28.4	52.8	55.4	46.5	36.7	36.5	33.7	34.7	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	3	10	19	30	31	31	30	21	0	0	0	175
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM <= 32°	2	2	0	0	0	0	0	0	0	0	0	0	0	4
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	282	265	23	26	0	0	0	0	0	0	69	359	1024	
	COOLING DEGREE DAYS	0	0	120	310	434	783	942	1039	800	436	33	0	4897	
RH	MEAN (PERCENT)	38	32	27	22	16	12	27	26	24	25	44	53	29	
	HOUR 05 LST	53	46	42	35	25	21	41	39	36	37	60	66	42	
	HOUR 11 LST	27	25	19	17	12	8	22	22	19	17	34	43	22	
	HOUR 17 LST	23	20	15	13	10	6	17	16	16	16	30	42	19	
	HOUR 23 LST	45	37	29	23	16	11	32	29	28	30	52	60	33	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	THUNDERSTORMS	0	0	0	1	0	0	6	4	2	0	1	0	14	
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.)	28.87	28.85	28.77	28.67	28.65	28.58	28.61	28.61	28.67	28.71	28.83	28.90	28.73	
	MEAN SEA-LEVEL PRESS. (IN.)	30.03	30.02	29.92	29.81	29.77	29.70	29.72	29.72	29.79	29.85	29.98	30.07	29.87	
WINDS	RESULTANT SPEED (MPH)	0.6	0.6	1.1	3.7	3.6	2.5	2.4	1.4	2.1	1.1	1.5	1.3	0.9	
	RES. DIR. (TENS OF DEGS.)	08	05	23	26	26	26	23	22	14	14	11	12	23	
	MEAN SPEED (MPH)	3.9	5.9	5.9	8.1	7.9	6.6	7.8	6.6	6.5	4.9	5.0	4.6	6.1	
	PREVAIL.DIR.(TENS OF DEGS.)	10	09	09	26	26	25	26	27	08	10	10	10	26	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	24	38	30	32	35	28	46	37	33	35	35	22	46	
	DIR. (TENS OF DEGS.)	02	27	23	27	21	27	22	06	13	27	23	26	22	
	DATE OF OCCURRENCE	23	19	07	26	18	19	10	27	10	04	04	18	JUL 10	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	31	47	39	39	41	32	66	43	41	41	61	26	66	
DIR. (TENS OF DEGS.)	02	22	24	28	21	26	23	06	16	26	23	27	23		
DATE OF OCCURRENCE	23	19	07	26	18	23	10	27	12	04	04	18	JUL 10		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.04	0.66	0.06	0.27	0.01	0.00	1.41	0.17	0.02	0.11	0.81	1.10	4.66	
	GREATEST 24-HOUR (IN.)	0.03	0.34	0.06	0.27	0.01	0.00	0.76	0.17	0.02	0.06	0.46	0.60	0.76	
	DATE OF OCCURRENCE	31	19-20	21	09	18		24-25	03	13	04	04-05	12-13	JUL 24-25	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	2	4	1	1	1	0	7	1	1	3	6	6	33		
PRECIPITATION 0.10	0	2	0	1	0	0	2	1	0	0	3	4	13		
PRECIPITATION 1.00	0	0	0	0	0	0	0	0	0	0	0	0	0		
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 PHOENIX (KPHX)

LATITUDE: 33° 25'N **LONGITUDE:** -112° 0'W **ELEVATION (FT):** GRND: 1107 BARO: 1106 **TIME ZONE:** MOUNTAIN (UTC -7) **WBAN: 23183**

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	67.3	71.4	76.1	84.7	93.9	103.	106.	104.	99.0	87.7	75.0	67.1	86.3	
	MEAN DAILY MAXIMUM	73	66.2	69.0	75.9	84.1	93.7	102.5	105.7	103.5	98.7	88.2	75.0	66.5	85.8	
	HIGHEST DAILY MAXIMUM	74	88	92	100	105	113	122	121	117	118	107	96	88	122	
	YEAR OF OCCURRENCE		1971	1986	1988	1992	1984	1990	1995	2011	1950	1980	2009	1950	1950	JUN 1990
	MEAN OF EXTREME MAXS.	73	77.8	82.2	88.6	97.3	104.9	112.3	113.6	111.1	107.8	99.6	87.3	77.6	96.7	
	NORMAL DAILY MINIMUM	30	44.8	48.4	53.0	57.6	67.4	75.6	82.9	81.6	75.6	62.1	50.4	43.9	61.9	
	MEAN DAILY MINIMUM	73	41.5	43.8	49.1	55.6	64.1	72.4	80.6	79.3	72.7	61.0	48.3	41.8	59.2	
	LOWEST DAILY MINIMUM	74	17	22	25	32	40	50	61	60	47	34	25	22	17	
	YEAR OF OCCURRENCE		1950	1948	1966	1945	1967	1944	1944	1942	1965	1971	1938	1948	1948	JAN 1950
	MEAN OF EXTREME MINS.	73	31.7	35.2	39.3	45.6	53.8	63.9	72.2	71.5	63.7	49.7	38.1	32.3	49.8	
	NORMAL DRY BULB	30	56.1	59.9	64.6	71.2	80.7	89.8	94.8	93.1	87.3	74.9	62.7	55.5	74.2	
	MEAN DRY BULB	73	53.8	56.4	62.5	69.9	78.9	87.5	93.1	91.4	85.7	74.6	61.7	54.2	72.5	
	MEAN WET BULB	28	42.0	43.8	46.1	48.1	52.3	56.7	66.8	68.1	62.4	53.8	45.8	42.1	52.3	
	MEAN DEW POINT	28	35.7	36.5	38.0	37.8	40.6	44.5	58.3	61.8	54.8	45.8	38.4	35.1	43.9	
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.1	2.2	10.5	23.1	29.2	30.8	30.7	28.0	15.3	0.7	0.0	170.6	
	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	
MINIMUM <= 32	30	1.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	2.8		
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	290	169	100	28	1	0	0	0	0	14	121	304	1027	
	NORMAL COOLING DEG. DAYS	30	2	15	74	226	478	745	910	859	667	336	51	1	4364	
RH	NORMAL (PERCENT)	30	50	45	40	28	23	19	31	35	34	35	42	49	36	
	HOURLY 05 LST	30	64	59	55	42	34	29	43	48	47	49	56	64	49	
	HOURLY 11 LST	30	44	39	34	23	19	16	28	32	31	31	36	44	31	
	HOURLY 17 LST	30	32	28	25	17	14	12	20	23	23	23	26	32	23	
	HOURLY 23 LST	30	53	47	41	28	23	19	32	36	36	39	46	54	38	
S	PERCENT POSSIBLE SUNSHINE	11	79	82	85	89	94	95	86	86	89	88	83	77	86	
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	48	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.1	
	THUNDERSTORMS	64	0.4	0.6	0.9	0.5	0.9	0.9	5.9	6.6	3.4	1.5	0.5	0.5	22.6	
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	1		2.4	2.0	2.4	1.2	1.2	1.6	0.8				1.6		
	MIDNIGHT-MIDNIGHT (OKTAS)	1		2.4		2.4	1.2	1.2	1.6	0.8		0.0				
	MEAN NO. DAYS WITH: CLEAR	1	5.0	17.5	18.0	14.0	26.0	17.0	6.0	10.0	15.0	15.0		13.0		
	PARTLY CLOUDY	1	1.0	5.0	5.0	4.0	1.5	4.0		1.0	2.0			5.0		
	CLOUDY			6.0	4.0	1.0	1.0			1.0						
PR	MEAN STATION PRESSURE(IN)	28	28.88	28.84	28.77	28.71	28.66	28.62	28.67	28.68	28.67	28.74	28.83	28.89	28.75	
	MEAN SEA-LEVEL PRES. (IN)	28	30.05	30.00	29.92	29.85	29.78	29.74	29.78	29.79	29.79	29.87	29.98	30.05	29.88	
WINDS	MEAN SPEED (MPH)	28	5.0	5.6	6.4	7.0	7.0	6.8	7.1	6.7	6.2	5.4	4.9	4.6	6.1	
	PREVAIL.DIR(TENS OF DEGS)	40	11	09	09	09	28	28	28	09	10	11	11	10	11	
	MAXIMUM 2-MINUTE: SPEED (MPH)	17	43	38	43	51	38	45	51	54	39	37	35	43	54	
	DIR. (TENS OF DEGS)		18	27	24	30	28	06	07	10	26	26	23	27	10	
	YEAR OF OCCURRENCE		2010	2011	1998	2001	2010	2006	2006	2008	2008	2004	2011	2009	AUG 2008	
	MAXIMUM 3-SECOND SPEED (MPH)	17	55	47	53	59	52	54	77	75	51	48	61	55	77	
	DIR. (TENS OF DEGS)		16	22	36	29	30	09	07	11	26	24	23	27	07	
YEAR OF OCCURRENCE		2010	2011	2009	2001	2009	2006	2005	2008	2008	1998	2011	2009	JUL 2005		
PRECIPITATION	NORMAL (IN)	30	0.83	0.77	1.07	0.25	0.16	0.09	0.99	0.94	0.75	0.79	0.73	0.92	8.29	
	MAXIMUM MONTHLY (IN)	74	5.22	3.15	4.16	2.10	1.06	1.70	5.15	5.56	4.23	4.40	3.04	3.98	5.56	
	YEAR OF OCCURRENCE		1993	2003	1941	1941	1976	1972	1984	1951	1939	1972	1952	1967	AUG 1951	
	MINIMUM MONTHLY (IN)	74	0.00	0.00	0.00	0.00	0.00	0.00	T	T	0.00	0.00	0.00	0.00	0.00	
	YEAR OF OCCURRENCE		1972	1967	1959	1962	1983	1983	1995	1975	1973	1973	1980	1981	JUN 1983	
	MAXIMUM IN 24 HOURS (IN)	74	1.84	1.65	2.04	1.38	0.96	1.64	2.75	3.07	2.43	2.32	2.16	1.89	3.07	
	YEAR OF OCCURRENCE		1993	2003	1983	1941	1976	1972	1984	1943	1970	1988	1993	1967	AUG 1943	
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	4.2	4.3	4.6	1.7	1.1	0.7	4.2	4.5	3.1	2.9	2.7	3.7	37.7	
PRECIPITATION >= 1.00	30	*	*	0.1	0.0	0.0	*	0.2	0.2	0.2	0.1	0.1	0.1	1.0		
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	
	MAXIMUM MONTHLY (IN)	62	T	0.6	T	T	T	0.0	0.0	0.0	0.0	T	0.0	0.4	0.6	
	YEAR OF OCCURRENCE		1993	1939	1991	1949	1992					1992		1990	FEB 1939	
	MAXIMUM IN 24 HOURS (IN)	62	T	0.6	T	T	T	0.0	0.0	0.0	0.0	T	0.0	0.4	0.6	
	YEAR OF OCCURRENCE		1993	1939	1991	1949	1992					1992		1990	FEB 1939	
	MAXIMUM SNOW DEPTH (IN)	48	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 PHOENIX (KPHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	0.81	0.67	1.30	T	0.50	T	0.43	1.97	0.12	T	2.50	1.64	9.94
1983	0.70	1.17	3.17	0.18	0.00	0.00	0.38	2.48	2.43	0.71	0.43	1.16	12.81
1984	0.31	0.00	0.00	0.91	0.18	0.18	5.15	0.87	3.36	0.31	0.71	2.93	14.91
1985	0.95	0.18	0.46	0.17	T	0.00	0.98	0.21	1.60	0.92	1.59	0.86	7.92
1986	0.07	1.19	1.58	0.01	T	0.01	1.19	1.27	0.47	0.41	0.03	1.38	7.61
1987	0.67	2.06	0.28	0.09	0.06	0.01	1.08	0.45	0.57	0.47	1.04	1.62	8.40
1988	0.90	0.23	0.17	1.09	0.00	0.02	0.87	0.63	0.00	2.38	0.78	0.14	7.21
1989	1.19	T	1.25	0.00	T	0.00	0.13	1.11	0.47	0.46	0.14	0.19	4.94
1990	0.80	0.70	0.35	0.17	0.16	0.04	1.05	2.70	1.11	0.04	0.15	0.46	7.73
1991	0.63	0.56	2.05	0.00	0.00	T	0.14	0.12	0.81	1.16	1.25	1.63	8.35
1992	1.62	0.90	2.49	0.49	1.05	0.04	2.95	1.30	0.03	0.26	0.03	3.08	14.24
1993	5.22	1.72	1.62	0.00	0.08	0.01	T	0.55	0.06	1.27	2.79	0.02	13.34
1994	0.13	0.54	1.36	0.09	0.39	T	0.25	0.02	1.74	0.55	0.68	3.03	8.78
1995	1.41	0.34	1.04	0.29	0.09	T	T	3.50	1.08	0.00	1.75	0.01	9.51
1996	0.25	1.03	0.55	T	T	T	1.04	0.34	0.54	0.37	0.23	0.02	4.37
1997	0.90	0.55	0.01	0.24	T	T	0.17	1.39	0.45	0.07	0.06	0.83	4.67
1998	0.35	2.93	1.31	0.43	0.04	0.00	1.94	1.05	0.58	1.03	0.19	0.68	10.53
1999	0.01	0.17	0.11	1.13	0.00	T	2.96	0.92	1.31	0.00	0.00	0.00	6.61
2000	0.01	T	2.98	0.00	0.00	0.34	0.28	0.58	0.01	3.17	0.50	0.00	7.87
2001	1.77	0.86	0.77	1.06	0.02	0.01	0.67	0.46	0.00	0.02	0.20	0.88	6.72
2002	0.05	0.00	0.08	0.06	0.00	T	1.18	T	0.50	0.37	0.42	0.16	2.82
2003	0.57	3.15	0.51	0.17	0.00	0.00	0.61	0.51	0.25	0.21	0.65	0.19	6.82
2004	0.82	1.02	1.28	0.90	0.00	0.00	0.59	0.36	0.15	0.78	0.52	1.56	7.98
2005	1.85	3.01	0.36	0.12	T	T	0.16	1.21	0.16	0.17	0.00	0.00	7.04
2006	0.00	0.00	1.56	T	T	T	1.29	1.26	0.78	0.22	T	0.34	5.45
2007	0.49	0.40	0.83	0.21	T	0.00	0.36	0.31	0.07	0.04	1.25	1.09	5.05
2008	1.58	0.39	0.00	0.00	0.45	T	2.15	3.55	T	T	0.49	0.97	9.58
2009	0.15	1.32	T	0.19	0.25	0.02	0.40	0.29	0.16	T	0.01	0.47	3.26
2010	2.43	1.36	1.09	0.04	0.00	T	1.97	0.38	0.13	0.66	0.01	1.07	9.14
2011	0.04	0.66	0.06	0.27	0.01	0.00	1.41	0.17	0.02	0.11	0.81	1.10	4.66
POR= 73 YRS	0.78	0.78	0.84	0.29	0.14	0.09	0.85	1.01	0.68	0.58	0.55	0.90	7.49

WBAN : 23183

AVERAGE TEMPERATURE (°F) 2011 PHOENIX (KPHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	53.9	60.1	62.4	72.5	80.4	88.1	93.7	93.7	86.7	73.5	61.9	54.1	73.4
1983	56.0	58.4	62.2	66.6	80.6	88.6	95.5	92.6	91.0	77.2	62.4	57.2	74.0
1984	57.4	60.1	67.6	70.7	87.0	88.9	91.7	91.2	87.5	71.4	61.9	53.7	74.1
1985	54.3	57.4	62.8	75.1	84.2	92.4	94.9	94.5	82.3	75.1	61.3	55.9	74.2
1986	61.4	61.0	69.3	74.2	82.3	92.8	92.3	94.5	84.1	74.7	65.0	56.4	75.7
1987	54.7	59.7	63.4	77.9	82.6	93.0	93.1	92.2	86.9	80.9	63.1	52.7	75.0
1988	55.1	62.5	66.3	73.0	81.4	93.1	96.2	93.9	87.4	82.4	64.4	55.7	76.0
1989	54.4	61.9	70.1	80.1	83.1	92.1	97.4	93.7	89.9	77.3	66.4	57.0	77.0
1990	55.6	56.6	67.2	76.2	81.1	93.8	93.6	90.8	87.6	78.7	65.9	53.6	75.1
1991	55.9	66.0	60.3	72.2	79.7	87.8	95.1	94.5	88.5	80.2	63.5	57.3	75.1
1992	56.4	62.1	64.7	77.0	83.1	90.1	92.8	92.3	90.5	79.8	61.5	53.8	75.3
1993	58.2	58.2	65.7	73.8	83.7	89.6	92.9	91.6	87.9	76.7	61.4	56.2	74.7
1994	56.8	58.1	65.0	71.8	78.3	92.2	93.9	95.3	86.9	73.1	58.0	55.3	73.7
1995	54.4	63.1	64.3	68.4	76.2	86.2	94.5	94.6	89.2	76.2	66.6	56.9	74.2
1996	55.8	62.3	65.1	74.1	83.0	91.9	95.2	94.1	84.3	74.9	64.5	56.5	75.1
1997	55.7	57.8	69.4	70.9	86.3	87.7	93.8	92.9	90.0	74.7	64.1	52.9	74.7
1998	56.6	54.1	61.9	66.7	76.2	85.4	94.5	94.7	87.9	74.1	62.7	54.4	72.4
1999	56.8	60.3	64.9	65.9	79.8	88.8	91.3	93.0	87.4	79.3	68.0	55.3	74.2
2000	58.1	60.9	63.1	75.2	84.8	91.0	95.0	92.5	90.3	72.5	56.9	57.3	74.8
2001	54.1	56.9	65.6	71.7	86.9	92.0	94.4	94.7	92.2	79.4	68.4	53.8	75.8
2002	56.0	61.3	65.2	76.7	81.7	93.4	96.0	95.1	89.8	75.1	66.9	55.2	76.0
2003	62.0	59.4	64.8	70.3	83.3	91.8	97.7	94.6	90.7	82.7	61.9	56.8	76.3
2004	57.5	55.8	72.3	72.7	83.4	91.2	94.5	92.7	88.1	75.1	61.0	56.0	75.0
2005	57.8	59.2	63.9	72.3	82.7	90.4	97.3	92.2	89.6	78.3	66.3	56.8	75.6
2006	57.7	61.8	62.3	72.7	84.7	94.6	96.5	92.6	85.7	76.1	67.1	54.3	75.5
2007	52.9	59.9	68.7	73.7	84.6	92.8	95.8	96.2	90.4	78.2	70.1	53.2	76.4
2008	54.7	58.3	66.7	74.0	78.5	93.2	94.9	93.0	89.9	77.9	67.2	55.9	75.4
2009	58.7	60.7	67.5	71.4	86.2	88.7	98.3	95.2	90.0	74.5	67.5	53.7	76.0
2010	57.4	59.1	62.8	70.6	78.3	91.3	96.8	94.0	91.5	77.7	63.0	59.6	75.2
2011	55.7	55.2	67.9	74.3	78.8	90.8	95.2	98.3	91.4	78.8	63.5	53.2	75.3
POR= 73 YRS	53.8	56.4	62.5	69.9	78.9	87.5	93.1	91.4	85.7	74.6	61.7	54.2	72.5

HEATING DEGREE DAYS (base 65°F) 2011 PHOENIX (KPHX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	0	0	0	1	103	331	272	181	120	53	0	0	1061
1983-84	0	0	0	0	154	236	228	139	16	23	0	0	796
1984-85	0	0	0	7	126	345	328	222	102	5	0	0	1135
1985-86	0	0	0	0	149	274	110	158	66	2	1	0	760
1986-87	0	0	0	0	43	260	318	172	95	4	0	0	892
1987-88	0	0	0	0	98	375	311	100	60	20	2	0	966
1988-89	0	0	0	0	135	284	321	133	46	0	0	0	919
1989-90	0	0	0	1	36	243	291	253	76	0	0	0	900
1990-91	0	0	0	0	65	348	275	27	161	5	0	0	881
1991-92	0	0	0	34	107	233	260	89	56	7	0	0	786
1992-93	0	0	0	0	127	340	205	184	61	0	0	0	917
1993-94	0	0	0	0	125	264	246	192	54	13	0	0	894
1994-95	0	0	0	15	211	293	320	61	74	48	6	0	1028
1995-96	0	0	0	0	22	243	278	111	63	0	0	0	717
1996-97	0	0	0	46	67	260	284	202	39	36	0	0	934
1997-98	0	0	0	9	83	369	250	299	138	77	2	0	1227
1998-99	0	0	0	4	73	322	245	127	65	104	2	0	942
1999-00	0	0	0	0	53	297	214	121	110	8	0	0	803
2000-01	0	0	0	19	238	234	330	222	87	45	0	0	1175
2001-02	0	0	0	0	68	341	272	115	74	0	0	0	870
2002-03	0	0	0	1	21	293	95	158	81	15	0	0	664
2003-04	0	0	0	0	106	251	231	260	46	9	0	0	903
2004-05	0	0	0	17	134	271	220	156	63	0	0	0	861
2005-06	0	0	0	0	50	247	227	102	119	4	0	0	749
2006-07	0	0	0	0	48	324	366	151	53	7	0	0	949
2007-08	0	0	0	0	30	360	313	201	51	0	3	0	958
2008-09	0	0	0	5	34	278	198	145	25	23	0	0	708
2009-10	0	0	0	23	44	342	226	158	101	18	0	0	912
2010-11	0	0	0	0	133	164	282	265	23	26	0	0	893
2011-	0	0	0	0	69	359							

WBAN : 23183

COOLING DEGREE DAYS (base 65°F) 2011 PHOENIX (KPHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1982	0	21	24	234	481	697	899	897	658	272	12	0	4195
1983	2	1	38	112	489	715	951	861	787	388	85	0	4429
1984	0	2	107	203	688	724	836	821	681	208	41	0	4311
1985	0	17	40	316	603	826	934	920	525	319	47	0	4547
1986	3	52	209	282	543	844	853	921	582	307	51	1	4648
1987	3	30	51	396	553	846	879	850	665	499	48	0	4820
1988	10	31	108	265	520	851	972	904	678	543	124	3	5009
1989	1	49	210	459	566	820	1013	897	751	392	87	0	5245
1990	5	25	150	339	506	873	895	806	683	431	101	0	4814
1991	0	61	22	227	465	691	937	920	712	514	70	0	4619
1992	0	13	54	373	567	762	868	851	771	464	30	0	4753
1993	1	1	89	271	585	746	871	832	695	369	24	0	4484
1994	0	3	59	223	421	821	904	943	664	273	10	0	4321
1995	0	19	58	158	365	642	923	927	733	354	79	0	4258
1996	0	41	70	278	564	817	943	908	583	358	60	4	4626
1997	2	8	185	217	665	689	899	873	756	315	62	0	4671
1998	0	0	50	136	361	619	924	928	691	295	13	2	4019
1999	0	7	68	138	468	724	820	875	679	453	151	1	4384
2000	6	7	60	321	624	789	939	860	764	259	0	0	4629
2001	0	0	112	250	685	816	920	928	823	452	177	0	5163
2002	0	19	89	358	525	858	971	940	749	325	82	0	4916
2003	8	6	79	179	576	810	1023	924	779	556	20	4	4964
2004	6	1	281	249	580	791	920	867	699	341	20	0	4755
2005	4	0	35	227	557	770	1005	850	745	418	98	0	4709
2006	8	21	46	241	619	898	988	861	626	349	119	0	4776
2007	0	11	177	277	615	839	963	973	768	419	189	0	5231
2008	0	11	108	277	429	852	935	873	752	412	104	0	4753
2009	9	33	108	222	663	718	1038	946	757	321	125	0	4940
2010	0	1	42	192	417	794	990	907	800	400	81	4	4628
2011	0	0	120	310	434	783	942	1039	800	436	33	0	4897

SNOWFALL (inches) 2011 PHOENIX (KPHX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	T	0.0	0.0	0.0	0.0	T
1985-86	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
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	0.4	0.0	0.0	T	0.0	0.0	0.0	0.4
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
1992-93	0.0	0.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
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	0.0	0.0	0.0
1998-99	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1999-00	0.0	0.0	0.0	0.0	0.0	0.0							
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-2006-													
POR= 54 YRS	0.0	0.0	0.0	T	0.0	T	T	T	T	0.0	T	0.0	T

WBAN : 23183

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 EIGHTHS(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 PHOENIX ARIZONA (KPHX)

Phoenix is located in the Salt River Valley at an elevation of about 1,100 feet. The valley is oval shaped and flat except for scattered precipitous mountains rising a few hundred to as much as 1,500 feet above the valley floor. Sky Harbor Airport, where the weather observations are taken, is in the southern part of the city. Six miles to the south of the airport are the South Mountains rising to 2,500 feet. Eighteen miles southwest, the Estrella Mountains rise to 4,500 feet, and 30 miles to the west are the White Tank Mountains rising to 4,100 feet. The Superstition Mountains, over 30 miles to the east, rise to as much as 5,000 feet. The valley, though located in the Sonora Desert, supports large acreages of cotton, citrus, and other agriculture along with one of the largest urban populations in the United States. The water supply for this complex desert community is partly from reservoirs on the impounded Salt and Verde Rivers, and partly from a large underground water table.

Temperatures range from very hot in summer to mild in winter. Many winter days reach over 70 degrees and typical high temperatures in the middle of the winter are in the 60s. The climate becomes less attractive in the summer. The normal high temperature is over 90 degrees from early May through early October, and over 100 degrees from early June through early September. Many days each summer will exceed 110 degrees in the afternoon and remain above 85 degrees all night. When temperatures are extremely high, the low humidity does not provide much comfort.

Indeed, the climate is very dry. Annual precipitation is only about 7 inches, and afternoon humidities range from about 30 percent in winter to only about 10 percent in June. Rain comes mostly in two seasons. From about Thanksgiving to early April there are periodic rains from Pacific storms. Moisture from the south and southeast results in a summer thunderstorm peak in July and August. Usually the break from extreme dryness in June to the onset of thunderstorms in early July is very abrupt. Afternoon humidities suddenly double to about 20 percent, which with the great heat, gives a feeling of mugginess. Fog is rare, occurring about once per winter, and is unknown in the other seasons.

The valley is characterized by light winds. High winds associated with thunderstorms occur periodically in the summer. These occasionally create duststorms which move large distances across the deserts. Strong thunderstorm winds occur any month of the year, but are rare outside the summer months. Persistent strong winds of 30 mph or more are rare except for two or three events in an average spring due to Pacific storms. Winter storms rarely bring high winds due to the relatively stable air in the valley during that season.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is December 13 and the average last occurrence in the spring is February 7.

Station History

PHOENIX, AZ

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
PHOENIX SKY HARBOR INTL AP	2000-10-12	2000-12-01	33° 26'	-112° 0'	1107		ASOS, COOP
PHOENIX SKY HARBOR INTL AP	2007-06-26	2011-01-11	33° 25'	-112° 0'	1107		AIRWAYS, ASOS, COOP
PHOENIX SKY HARBOR INTL AP	1978-01-01	1981-12-31	33° 25'	-112° 1'	1106		COOP, WXSVC
PHOENIX SKY HARBOR AP	1930-10-01	1948-01-01	33° 25'	-112° 1'			AIRWAYS
PHOENIX SKY HARBOR INTL AP	1981-12-31	1994-03-01	33° 25'	-112° 1'	1106		COOP
PHOENIX SKY HARBOR AP	1953-01-01	1958-01-01	33° 25'	-112° 1'	1119		AIRWAYS, COOP
PHOENIX SKY HARBOR INTL AP	1997-02-06	2000-10-12	33° 26'	-111° 59'	1107	.8 MI N	ASOS, COOP
PHOENIX SKY HARBOR AP	1958-01-01	1971-07-01	33° 25'	-112° 1'	1112		AIRWAYS, COOP
PHOENIX SKY HARBOR INTL AP	2000-12-01	2007-06-26	33° 25'	-112° 0'	1107	1.4 MI SW	ASOS, COOP
PHOENIX SKY HARBOR AP	1948-01-01	1953-01-01	33° 25'	-112° 1'	1112		AIRWAYS, COOP
PHOENIX SKY HARBOR INTL AP	1973-01-01	1978-01-01	33° 25'	-112° 1'	1112		COOP, WXSVC
PHOENIX SKY HARBOR INTL AP	1994-03-01	1995-03-01	33° 26'	-111° 59'	1107	1.7 MI NE	ASOS, COOP
PHOENIX SKY HARBOR INTL AP	1971-07-01	1973-01-01	33° 25'	-112° 1'	1112		AIRWAYS, COOP
PHOENIX SKY HARBOR INTL AP	1995-03-01	1997-02-06	33° 26'	-111° 59'	1107		ASOS, COOP
PHOENIX SKY HARBOR INTL AP	2011-01-11	Present	33° 25'	-112° 0'	1107		ASOS, COOP

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1982-01-01	1984-01-11	DAILY	2400	UNIV	RCRD	
TEMP	1982-01-01	1984-01-11	DAILY	2400			
PRECIP	1995-07-01	1996-06-25	HOURLY	2400	TB	RCRD	
PRECIP	1996-06-25	2000-12-01	DAILY	2400	TB	RCRD	
PRECIP	2000-12-01	2007-06-26	HOURLY	2400	AHTB	RCRD;HTD	
PRECIP	1995-03-01	1995-07-01	HOURLY	2400			
PRECIP	1995-03-01	1995-07-01	DAILY		TB	RCRD	
PRECIP	1995-07-01	1996-06-25	DAILY	2400	TB	RCRD	
TEMP	1995-07-01	1996-06-25	DAILY		HYGR		
PRECIP	1996-06-25	2000-12-01	HOURLY	2400	TB	RCRD	
TEMP	1930-10-01	1982-01-01	DAILY	2400			
PRECIP	1984-01-11	1995-03-01	DAILY	2400	UNIV	RCRD	
TEMP	2000-12-01	2007-06-26	DAILY	2400	ATEMP		
PRECIP	2007-06-26	Present	DAILY	0800	PCPNX		
PRECIP	1982-01-01	1984-01-11	HOURLY	2400			
TEMP	2007-06-26	Present	DAILY	2400	ATEMP		
PRECIP	2000-12-01	2007-06-26	DAILY	2400	PCPNX		
PRECIP	1984-01-11	1995-03-01	HOURLY	2400			
PRECIP	1930-10-01	1982-01-01	DAILY	2400	UNIV	RCRD	
TEMP	1984-01-11	1995-03-01	DAILY		HYGR		
TEMP	1995-03-01	1995-07-01	DAILY		HYGR		
TEMP	1996-06-25	2000-12-01	DAILY	2400	HYGR		
PRECIP	2007-06-26	Present	DAILY	2400	PCPNX		
PRECIP	2007-06-26	Present	HOURLY	2400	AHTB	RCRD;HTD	
TEMP	2007-06-26	Present	DAILY	0800	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

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