

2003

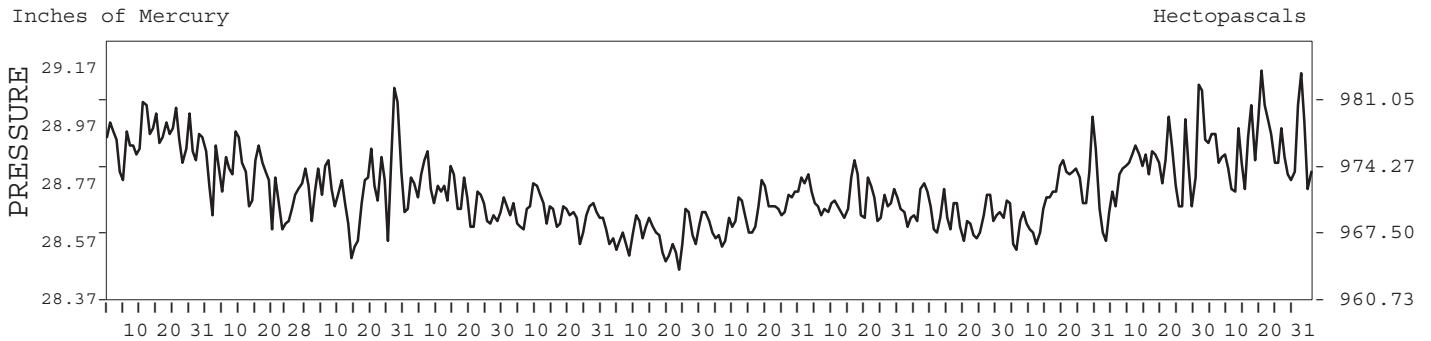
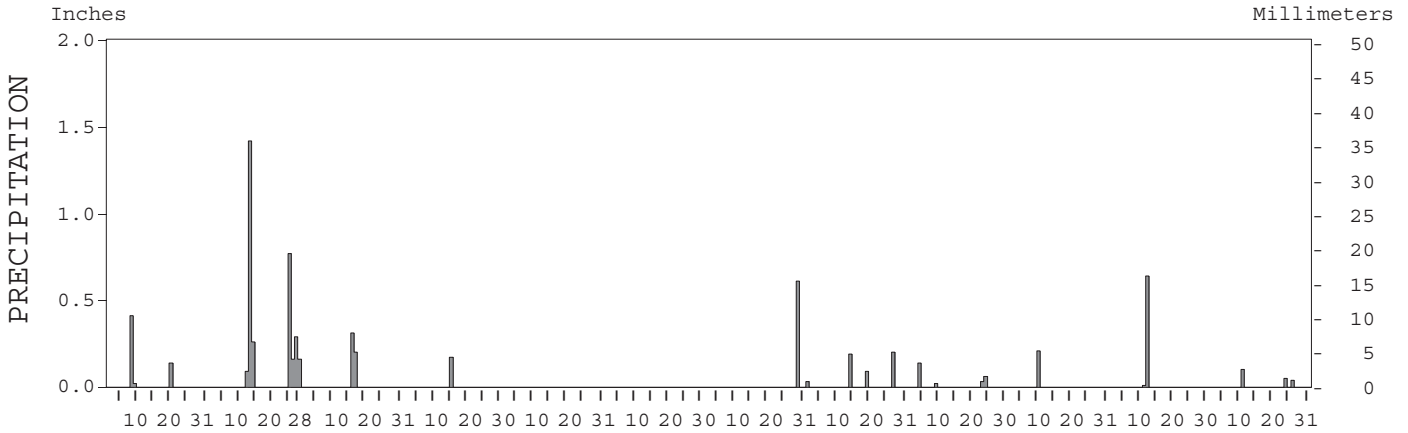
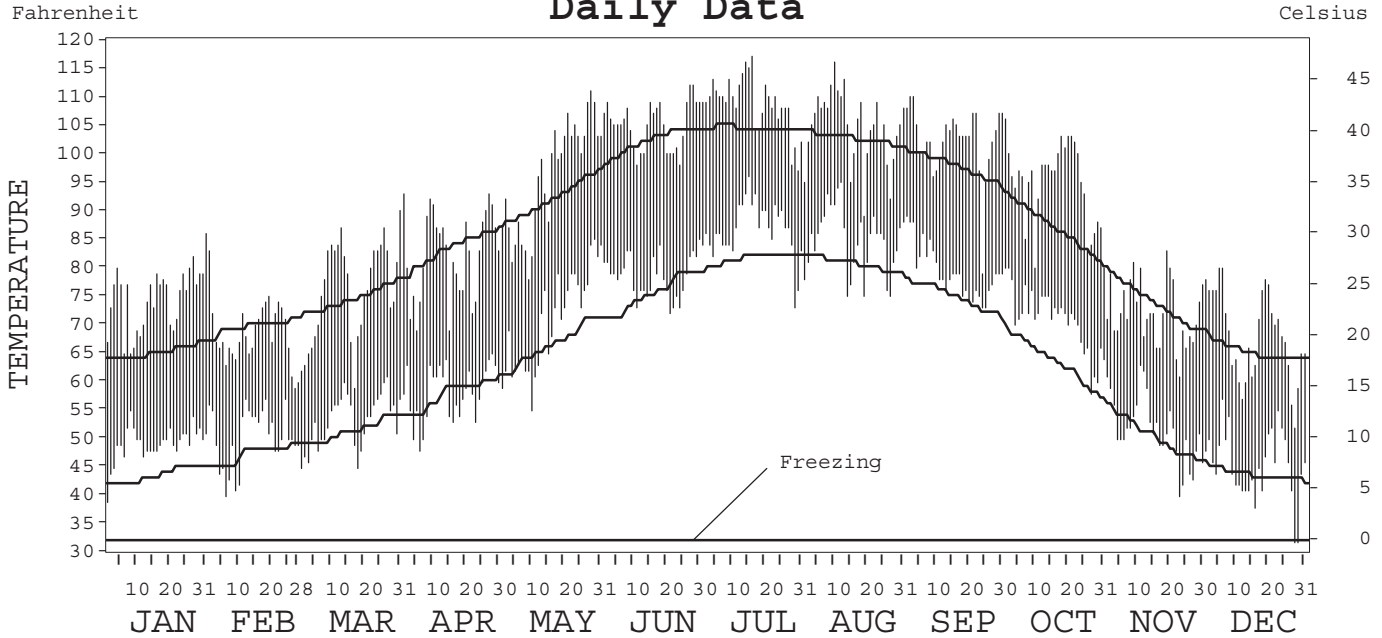
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-0572

PHOENIX,
ARIZONA (PHX)

Daily Data



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METEOROLOGICAL DATA FOR 2003

PHOENIX, AZ (PHX)

LATITUDE: 33° 26' 35" N LONGITUDE: 111° 59' 25" W ELEVATION (FT): GRND: 1103 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	74.6	68.5	76.2	82.4	95.9	105.0	108.7	104.5	102.2	94.6	72.1	68.1	87.7	
	HIGHEST DAILY MAXIMUM	86	83	90	93	111	112	117	116	110	106	83	80	117	
	DATE OF OCCURRENCE	31	01	31	27+	28	28+	16	10	03+	01	19	06+	JUL 16	
	MEAN DAILY MINIMUM	49.3	50.3	53.3	58.1	70.7	78.5	86.6	84.7	79.2	70.8	51.6	45.5	64.9	
	LOWEST DAILY MINIMUM	39	40	45	48	55	78	73	75	73	58	40	32	32	
	DATE OF OCCURRENCE	01	06	18+	06	10	26	29	27+	25+	27	23	29+	DEC 29+	
	AVERAGE DRY BULB	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	
	MEAN WET BULB	49.5	48.6	50.8	50.9	57.1	60.7	70.0	71.9	66.7	60.5	48.9	43.5	56.6	
	MEAN DEW POINT	36.1	36.5	35.9	27.9	31.6	32.9	53.2	60.0	50.2	41.8	33.6	25.8	38.8	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	1	6	21	30	31	30	29	23	0	0	0	171
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	2	2	2	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	95	158	81	15	0	0	0	0	0	106	251	706		
	COOLING DEGREE DAYS	8	6	79	179	576	810	1023	924	779	556	20	4	4964	
RH	MEAN (PERCENT)	44	50	40	23	17	13	25	35	29	27	40	35	32	
	HOUR 05 LST	58	60	58	37	26	21	36	46	39	37	53	49	43	
	HOUR 11 LST	38	45	35	20	15	12	25	33	27	24	34	30	28	
	HOUR 17 LST	27	35	24	13	10	7	15	23	19	17	27	21	20	
	HOUR 23 LST	50	54	42	22	18	13	25	36	31	31	44	38	34	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	0	0	0	0	0	0	0	0	0	0	0	1	
	THUNDERSTORMS	1	2	2	0	0	0	6	3	1	0	0	0	15	
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.)	28.93	28.77	28.76	28.72	28.67	28.59	28.67	28.71	28.66	28.71	28.85	28.90	28.75	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	29.93	29.91	29.86	29.79		29.78	29.82	29.78		30.00	30.06		
WINDS	RESULTANT SPEED (MPH)	1.6	1.2	0.6	1.8	1.6	1.3	2.0	0.8	0.5	1.7	0.6	0.8	0.5	
	RES. DIR. (TENS OF DEGS.)	11	14	03	24	21	25	25	31	24	12	13	10	19	
	MEAN SPEED (MPH)	4.3	6.0	9.1	7.9	7.2	8.0	8.4	7.3	6.5	5.6	5.5	5.6	6.8	
	PREVAIL. DIR. (TENS OF DEGS.)	09	09	09	08	09	26	26	26	09	10	10	10	09	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	23	33	30	32	26	25	47	41	38	24	31	31	47	
	DIR. (TENS OF DEGS.)	05	29	28	26	17	28	16	09	15	05	28	27	16	
	DATE OF OCCURRENCE	02	25	27	15	30	10	29	14	04	25	22	26	JUL 29	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	30	38	36	40	36	33	56	49	48	32	37	36	56	
DIR. (TENS OF DEGS.)	07	28	27	27	16	17	17	10	17	03	28	26	17		
DATE OF OCCURRENCE	02	25	27+	15	30	09	29	14	04	25	22	26	JUL 29		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	0.43	1.65	0.34	0.17	0.00	0.00	0.61	0.20	0.14	0.21	0.65	0.10	1.65	
	DATE OF OCCURRENCE	08-09	13-14	16-17	15			29	27	04	10	11-12	11	FEB 13-14	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	3	7	2	1	0	0	1	4	4	1	2	3	28	
PRECIPITATION ≥ 0.10	2	6	2	1	0	0	1	2	1	1	1	1	18		
PRECIPITATION ≥ 1.00	0	1	0	0	0	0	0	0	0	0	0	0	1		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

PHOENIX, AZ (PHX)

LATITUDE: 33° 26' 35" N LONGITUDE: 111° 59' 25" W ELEVATION (FT): GRND: 1103 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	65.0	69.4	74.3	83.0	91.9	102.0	104.2	102.4	97.4	86.4	73.3	65.0	84.5
	MEAN DAILY MAXIMUM	53	66.3	70.4	75.5	84.3	93.4	103.0	105.3	103.3	98.9	88.3	74.7	66.3	85.8
	HIGHEST DAILY MAXIMUM	66	88	92	100	105	113	122	121	116	118	107	95	88	122
	YEAR OF OCCURRENCE		1971	1986	1988	1992	1984	1990	1995	2003	1950	1980	2001	1950	JUN 1990
	MEAN OF EXTREME MAXS.	56	77.8	82.2	88.0	97.2	104.9	112.3	113.5	110.7	107.5	99.4	86.7	77.5	96.5
	NORMAL DAILY MINIMUM	30	43.4	47.0	51.1	57.5	66.3	75.2	81.4	80.4	74.5	62.9	50.0	43.5	61.1
	MEAN DAILY MINIMUM	53	42.1	45.3	49.6	56.2	64.8	73.4	81.1	79.9	73.3	61.6	49.1	42.5	59.9
	LOWEST DAILY MINIMUM	66	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	JAN 1950
	MEAN OF EXTREME MINS.	56	31.0	34.7	38.5	44.9	53.0	63.5	71.6	71.2	63.0	49.1	37.5	32.0	49.2
	NORMAL DRY BULB	30	54.2	58.2	62.7	70.2	79.1	88.6	92.8	91.4	86.0	74.6	61.6	54.3	72.8
	MEAN DRY BULB	56	53.8	57.6	62.4	70.0	79.1	88.2	93.0	91.5	86.1	74.5	61.9	54.0	72.7
	MEAN WET BULB	51	44.0	46.1	48.6	52.3	56.7	62.0	70.0	70.5	65.7	57.5	49.0	44.0	55.5
	MEAN DEW POINT	51	33.1	33.2	33.4	33.6	35.7	40.8	56.9	59.2	52.9	43.6	36.1	32.9	41.0
	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	322	187	125	29	4	0	0	0	0	11	129	318	1125
	NORMAL COOLING DEG. DAYS	30	2	12	70	199	457	724	878	834	646	324	43	0	4189
RH	NORMAL (PERCENT)	30	50	45	40	28	23	19	31	35	34	35	42	49	36
	HOUR 05 LST	30	64	59	55	42	34	29	43	48	47	48	56	64	49
	HOUR 11 LST	30	44	39	34	23	19	16	28	32	30	31	36	44	31
	HOUR 17 LST	30	32	28	25	17	14	12	20	23	23	23	26	32	23
	HOUR 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)	66	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	1.4
	THUNDERSTORMS	64	0.4	0.6	0.9	0.7	1.0	1.0	5.9	6.8	3.4	1.4	0.5	0.6	23.2
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	1		6.0	4.0	1.0	1.0			1.0						
PR	MEAN STATION PRESSURE (IN)	30	28.89	28.87	28.78	28.72	28.66	28.64	28.68	28.69	28.69	28.76	28.84	28.89	28.76
	MEAN SEA-LEVEL PRES. (IN)	50	30.06	30.01	29.93	29.86	29.80	29.75	29.79	29.80	29.80	29.89	30.00	30.05	29.89
WINDS	MEAN SPEED (MPH)	48	5.1	5.7	6.6	6.8	6.9	6.6	6.9	6.5	6.1	5.6	5.2	4.9	6.1
	PREVAIL. DIR (TENS OF DEGS)	32	10	10	10	09	27	27	27	09	10	10	10	10	10
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	9	36	33	43	51	32	33	47	41	39	36	31	39	51
	DIR. (TENS OF DEGS)		25	29	24	30	26	04	16	09	15	24	28	29	30
	YEAR OF OCCURRENCE		1995	2003	1998	2001	2001	2000	2003	2003	2002	1998	2003	2002	APR 2001
	MAXIMUM 5-SECOND:														
SPEED (MPH)	9	39	39	53	59	40	40	61	53	51	48	37	47	61	
DIR. (TENS OF DEGS)		24	26	24	29	27	04	15	25	15	24	28	29	15	
YEAR OF OCCURRENCE		1995	2000	1998	2001	2001	2000	2002	2000	1999	1998	2003	2002	JUL 2002	
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)	66	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)	66	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)	66	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) 2003 PHOENIX, AZ (PHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0.57	0.02	1.37	0.01	0.00	0.00	0.84	1.15	1.07	2.12	0.44	0.59	8.18
1975	0.02	0.33	0.63	0.43	T	T	0.38	T	0.82	0.23	0.55	1.12	4.51
1976	T	0.47	0.40	0.67	1.06	0.09	1.48	0.12	1.69	0.70	0.43	0.85	7.96
1977	0.35	0.06	0.27	0.06	0.16	0.10	0.30	0.18	0.53	0.61	T	0.54	3.16
1978	2.33	2.21	2.14	0.20	T	0.01	1.44	1.79	T	0.35	2.30	2.46	15.23
1979	2.16	0.09	1.78	0.02	0.76	0.04	0.34	1.18	0.09	0.09	0.12	0.13	6.80
1980	1.58	2.09	0.86	0.44	0.21	0.03	0.56	0.06	0.13	0.02	0.00	0.08	6.06
1981	0.71	1.08	0.98	0.20	0.03	T	1.14	0.11	0.18	1.34	0.95	0.00	6.72
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
POR= 108 YRS	0.80	0.79	0.80	0.35	0.14	0.10	0.95	1.02	0.80	0.55	0.65	0.90	7.85

WBAN : 23183

AVERAGE TEMPERATURE (°F) 2003 PHOENIX, AZ (PHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	54.0	56.7	64.5	70.6	80.2	92.2	92.4	91.2	87.2	75.9	61.5	50.6	73.1
1975	52.3	54.0	59.0	62.6	76.7	86.6	94.3	91.9	86.2	72.9	60.9	54.8	71.0
1976	55.4	60.7	61.5	68.7	80.7	87.9	91.6	90.7	83.0	74.0	64.1	55.6	72.8
1977	53.8	61.7	60.8	73.5	75.7	91.4	95.0	94.1	87.6	78.7	65.8	59.9	74.8
1978	56.6	58.7	65.6	69.2	78.5	90.9	94.6	91.4	86.3	78.6	61.5	51.7	73.6
1979	50.1	55.7	60.4	70.1	78.1	89.5	93.8	89.4	90.2	77.2	58.2	55.9	72.4
1980	56.6	60.6	60.7	69.8	76.0	88.9	95.6	92.2	87.3	75.6	64.1	61.3	74.1
1981	59.2	61.4	63.8	76.0	80.5	93.4	95.2	95.8	89.2	73.6	66.1	58.6	76.1
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
POR= 108 YRS	52.6	56.5	61.2	69.0	77.4	86.6	91.6	90.0	84.8	73.0	60.9	53.1	71.4

HEATING DEGREE DAYS (base 65°F) 2003 PHOENIX, AZ (PHX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0	0	0	21	112	439	388	301	191	107	4	0	1563
1975-76	0	0	0	15	159	310	296	123	134	52	0	0	1089
1976-77	0	0	0	2	112	285	339	122	149	33	0	0	1042
1977-78	0	0	0	0	42	155	254	172	67	25	0	0	715
1978-79	0	0	0	1	148	405	455	254	143	30	0	0	1436
1979-80	0	0	0	11	204	277	254	130	129	35	0	0	1040
1980-81	0	0	0	12	108	122	181	131	74	8	0	0	636
1981-82	0	0	0	1	56	196	335	151	99	4	0	0	842
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-	0	0	0	0	106	251							

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COOLING DEGREE DAYS (base 65°F) 2003 PHOENIX, AZ (PHX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0	2	69	182	477	825	858	821	673	365	13	0	4285
1975	0	0	12	42	374	654	913	839	640	265	45	1	3785
1976	6	4	34	169	495	692	833	804	548	289	91	0	3965
1977	0	36	25	295	334	797	936	907	683	434	73	1	4521
1978	3	1	92	158	422	787	928	828	644	431	49	0	4343
1979	0	0	11	191	411	741	901	763	764	397	7	0	4186
1980	0	5	2	187	344	724	956	852	675	346	88	13	4192
1981	5	36	40	345	489	857	943	961	731	277	95	5	4784
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

SNOWFALL (inches) 2003 PHOENIX, AZ (PHX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
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	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-													
POR= 62 YRS	0.0	0.0	0.0	T	0.0	T	T	T	T	T	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.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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2003 PHOENIX, ARIZONA (PHX)

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 LOCATION

PHOENIX, ARIZONA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATED OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
						GROUND											
						SEA LEVEL GROUND	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	WINDHANG GAGE	8 INCH RAIN GAGE	HYGROMETER			
*NOTE: <u>AIRPORT</u>																	
Administration Building Sky Harbor Airport	5/2/33	12/19/52	3 mi. ESE-PO	33°26'	112°02'	1108	29	5	5	NA			3	d		Station closed 7/27/35 to 1/1/38. Cotton Region Shelter moved 110 feet NE & Standard Shelter added 10/1/40.	
New Terminal Building Sky Harbor Airport	12/19/52	5/29/58	0.8 mi. SE	33°26'	112°01'	1114	32	5	5	cUnk		c5	3	d		c. Added 11/1/53. d. Telepsychrometer (5') 6/1/49-12/20/60. Hygro. comm. 3900' E of office 12/20/60.	
FAA Operations Bldg. Sky Harbor Airport + Sky Harbor Int'l AP effective 1971.	5/29/58	1/25/78	0.3 mi. NW	33°26'	112°01'	1109 e1117 g1112	41 e18 f36	5	5	35		4	3	d5 f7		e. Effective 12/20/60. f. Moved 2800' SW 9/19/75. g. Effective 9/19/75.	
Wea. Svc. Forecast Off. Sky Harbor Int'l AP	1/25/78	03/01/94	3000 ft SW	33°26'	112°01'	1110	33	5	5	7	5	5	5	NA			
Sky Harbor Int'l AP	03/01/94	Present	NA	33°27'	111°59'	h1103								S		ASOS Commissioned 03/01/94 h. Ground elevation.	

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* NOTES: For earlier station history see previous edition.