

2002

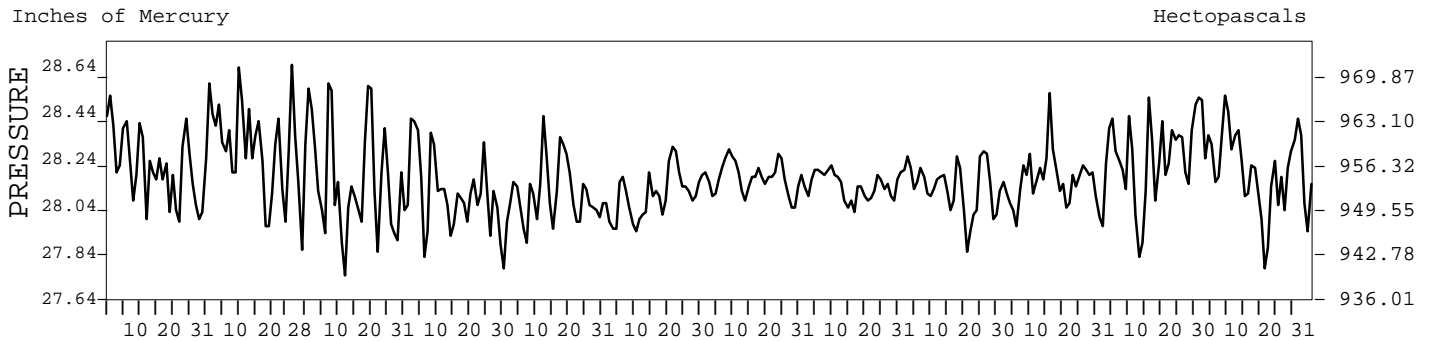
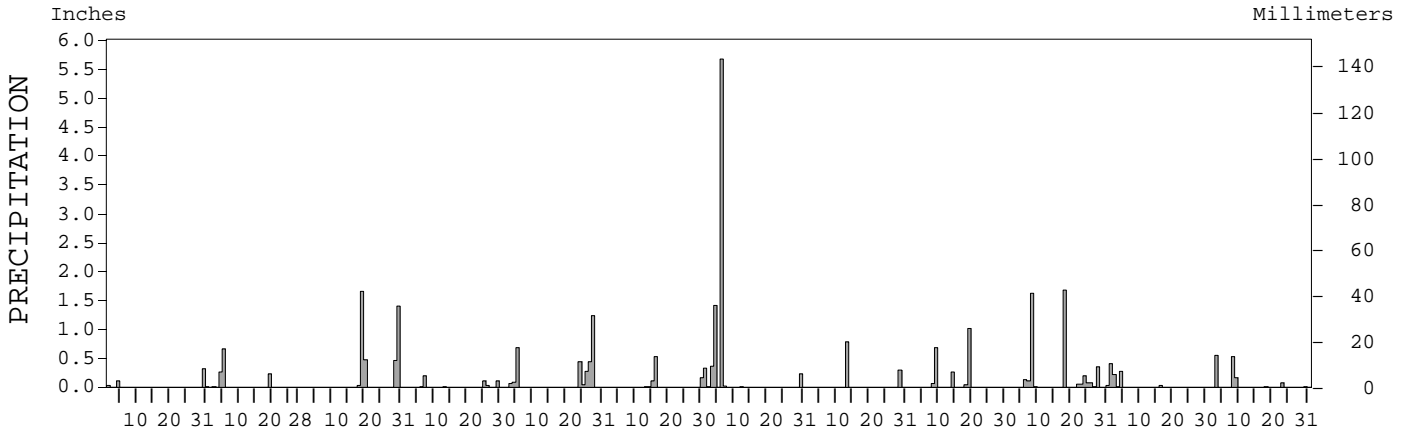
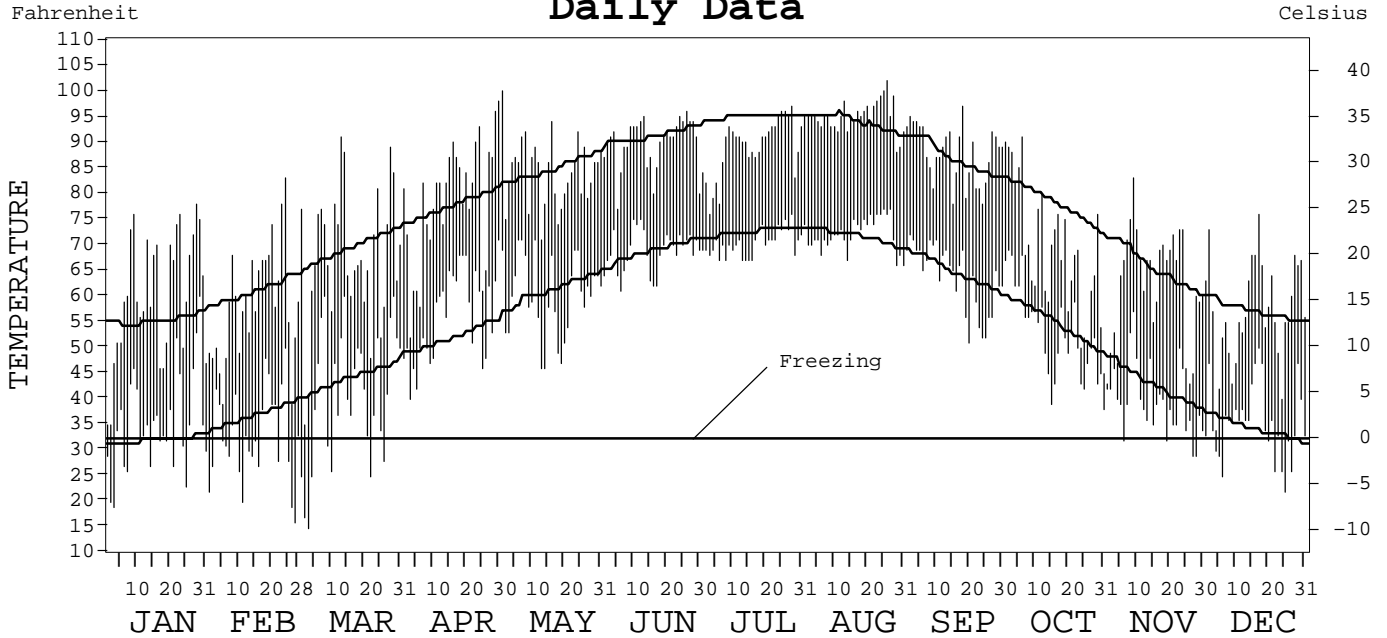
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-4888

ABILENE,  
TEXAS (ABI)

## Daily Data



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*Thomas R. Karl*

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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# METEOROLOGICAL DATA FOR 2002

## ABILENE, TX (ABI)

LATITUDE: 32° 24' 40" N      LONGITUDE: 99° 40' 54" W      ELEVATION (FT): GRND: 1789      BARO: 1792      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13962

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	60.3	58.5	67.7	78.6	84.2	89.9	89.0	95.0	87.8	68.9	62.5	57.0	74.9	
	HIGHEST DAILY MAXIMUM	78	83	91	98	100	96	97	102	97	91	83	76	102	
	DATE OF OCCURRENCE	28	24	13	30	01	26	28	26	18	06	09	17	AUG 26	
	MEAN DAILY MINIMUM	35.4	32.9	40.9	56.1	60.1	68.8	70.4	72.1	63.7	52.9	39.7	35.4	52.4	
	LOWEST DAILY MINIMUM	19	16	15	40	46	61	67	66	51	38	29	22	15	
	DATE OF OCCURRENCE	03	27	03	03	14+	06	16+	31+	20	31	28+	25	MAR 03	
	AVERAGE DRY BULB	47.9	45.7	54.3	67.4	72.2	79.4	79.7	83.6	75.8	60.9	51.1	46.2	63.7	
	MEAN WET BULB	39.6	37.5	44.4	59.0	63.0	69.7	72.3	71.8	66.0	56.5	44.1	40.3	55.3	
	MEAN DEW POINT	29.7	24.9	33.2	52.8	57.3	65.2	69.0	66.2	60.6	53.5	36.4	33.1	48.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	1	5	5	20	18	29	13	2	0	0	0	93
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	13	15	8	0	0	0	0	0	0	0	4	9	49	
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	529	533	361	88	16	0	0	0	196	414	573	2710		
	COOLING DEGREE DAYS	4	2	37	165	244	438	465	584	328	77	5	0	2349	
RH	MEAN (PERCENT)	56	49	53	64	63	66	74	59	64	82	62	66	63	
	HOUR 00 LST	60	58	59	70	69	73	82	65	74	86	71	70	70	
	HOUR 06 LST	69	64	65	79	84	86	93	82	86	90	76	75	79	
	HOUR 12 LST	49	39	45	54	54	56	63	50	48	74	48	57	53	
	HOUR 18 LST	41	35	37	52	46	48	58	40	44	74	51	56	48	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	0	0	1	0	1	1	0	0	3	0	0	6	
	THUNDERSTORMS	0	0	3	3	8	1	3	2	2	4	0	0	26	
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.)	28.20	28.30	28.15	28.10	28.08	28.08	28.16	28.13	28.11	28.15	28.26	28.18	28.16	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	30.19	30.02	29.93	29.90	29.89	29.97	29.93	29.92		30.13	30.07		
WINDS	RESULTANT SPEED (MPH)	3.2	2.0	2.0	1.7	5.2	5.1	3.7	5.3	3.0	2.0	2.3	3.7	2.1	
	RES. DIR. (TENS OF DEGS.)	22	23	19	09	15	11	19	14	18	09	25	24	17	
	MEAN SPEED (MPH)	11.0	11.8	13.5	12.4	13.5	11.7	10.1	10.7	8.1	8.9	9.5	10.9	11.0	
	PREVAIL. DIR. (TENS OF DEGS.)	21	35	36	16	15	15	14	17	15	36	36	21	17	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	37	38	39	35	41	38	29	40	30	30	29	32	41	
	DIR. (TENS OF DEGS.)	21	18	35	18	33	36	15	34	33	25	18	21	33	
	DATE OF OCCURRENCE	20	18	09	07+	24	15	29	29	19	18	14+	29	MAY 24	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	46	45	47	43	62	48	37	49	35	38	37	38	62	
DIR. (TENS OF DEGS.)	20	17	01	18	33	36	05	33	33	25	26	22	33		
DATE OF OCCURRENCE	20	18	02	27	24	15	29	29	19	18	09	29+	MAY 24		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.47	1.16	4.01	0.46	3.24	0.81	8.04	1.07	2.05	4.37	0.93	1.33	27.94	
	GREATEST 24-HOUR (IN.)	0.33	0.75	2.05	0.20	1.66	0.63	5.67	0.78	1.05	1.68	0.44	0.69	5.67	
	DATE OF OCCURRENCE	30-31	04-05	19-20	06-07	27-28	15-16	06	13	18-19	18	01-02	08-09	JUL 06	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	4	4	5	6	8	5	8	2	5	13	5	6	71	
PRECIPITATION ≥ 0.10	2	3	4	3	5	3	5	2	3	6	3	3	42		
PRECIPITATION ≥ 1.00	0	0	2	0	1	0	2	0	1	2	0	0	8		
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

## ABILENE, TX (ABI)

LATITUDE: 32° 24' 40" N      LONGITUDE: 99° 40' 54" W      ELEVATION (FT): GRND: 1789      BARO: 1792      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13962

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	55.2	60.7	69.1	77.3	84.7	91.1	94.8	93.7	86.7	77.6	65.1	56.9	76.1
	MEAN DAILY MAXIMUM	55	55.5	60.4	68.3	77.4	84.4	91.2	95.0	94.3	87.0	77.4	65.3	57.6	76.2
	HIGHEST DAILY MAXIMUM	63	89	93	97	99	109	109	110	109	107	103	92	89	110
	YEAR OF OCCURRENCE		1943	1996	1974	1948	2000	1994	1978	1943	2000	1979	1980	1955	JUL 1978
	MEAN OF EXTREME MAXS.	55	77.2	81.2	87.1	92.6	97.7	100.0	101.6	101.5	97.9	91.6	82.6	77.5	90.7
	NORMAL DAILY MINIMUM	30	31.8	36.5	43.8	51.8	61.0	68.5	72.3	71.4	64.4	54.4	42.3	33.9	52.7
	MEAN DAILY MINIMUM	55	31.9	36.0	43.1	52.3	61.1	68.9	72.6	71.7	64.6	54.5	42.2	34.2	52.8
	LOWEST DAILY MINIMUM	63	-9	-7	7	25	36	47	55	50	35	23	14	-7	-9
	YEAR OF OCCURRENCE		1947	1985	1943	1973	1979	1964	1940	1992	1942	1993	1976	1989	JAN 1947
	MEAN OF EXTREME MINS.	55	14.4	18.6	23.7	34.5	45.8	58.3	64.8	63.2	48.8	37.3	25.1	17.3	37.6
	NORMAL DRY BULB	30	42.8	47.4	56.1	65.4	72.7	80.2	84.0	83.2	76.0	66.4	54.9	45.5	64.6
	MEAN DRY BULB	55	43.8	48.3	55.7	65.1	72.7	79.9	83.7	83.0	75.9	65.9	53.8	45.9	64.5
	MEAN WET BULB	17	37.8	41.4	47.2	54.1	63.2	68.9	69.9	69.5	64.7	53.8	46.5	39.3	54.7
	MEAN DEW POINT	17	29.1	32.7	37.8	45.1	56.6	63.4	63.4	62.8	58.5	47.1	38.9	31.6	47.2
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.6	2.9	8.3	19.0	26.1	25.1	12.0	2.4	0.1	0.0	96.5	
MAXIMUM ≤ 32°	30	2.2	1.1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	4.7	
MINIMUM ≤ 32°	30	17.7	11.5	4.4	0.4	0.0	0.0	0.0	0.0	0.0	0.2	4.6	14.2	53.0	
MINIMUM ≤ 0°	30	*	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
H/C	NORMAL HEATING DEG. DAYS	30	678	477	299	113	20	0	0	0	18	93	353	608	2659
	NORMAL COOLING DEG. DAYS	30	0	5	28	94	253	442	568	535	327	118	15	1	2386
RH	NORMAL (PERCENT)	30	60	60	54	55	60	59	54	55	62	61	62	61	59
	HOUR 00 LST	30	66	66	61	62	68	66	59	60	68	67	68	67	65
	HOUR 06 LST	30	72	72	70	72	78	78	72	73	78	76	75	72	74
	HOUR 12 LST	30	53	53	47	46	51	50	46	46	53	51	52	53	50
	HOUR 18 LST	30	48	46	39	40	44	43	38	40	48	48	51	52	45
S	PERCENT POSSIBLE SUNSHINE	49	62	64	70	72	70	78	80	77	70	72	67	63	70
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	64	1.3	1.4	0.7	0.5	0.4	0.1	0.0	0.1	0.4	0.7	1.0	1.2	7.8
	THUNDERSTORMS	64	0.6	1.4	2.8	5.0	7.7	5.9	4.4	4.9	3.5	2.9	1.5	0.8	41.4
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	57	4.5	4.6	4.3	4.1	4.4	3.6	3.5	3.5	3.6	3.4	3.8	4.2	4.0
	MIDNIGHT-MIDNIGHT (OKTAS)	32	4.1	4.1	3.8	3.7	3.9	3.3	2.9	3.2	3.4	3.0	3.5	3.8	3.6
	MEAN NO. DAYS WITH:														
CLEAR	58	11.1	9.9	11.4	11.7	9.9	12.6	14.1	14.1	13.5	14.9	13.2	11.7	148.1	
PARTLY CLOUDY	58	6.1	6.2	7.5	7.8	10.0	10.6	9.7	9.6	7.8	6.8	5.9	6.2	94.2	
CLOUDY	58	13.7	12.2	12.1	10.5	11.1	6.8	6.7	6.8	8.3	8.8	10.4	12.6	120.0	
PR	MEAN STATION PRESSURE (IN)	28	28.20	28.19	28.10	28.10	28.00	28.10	28.10	28.10	28.19	28.21	28.20	28.20	28.14
	MEAN SEA-LEVEL PRES. (IN)	17	30.11	30.07	29.97	29.90	29.86	29.88	29.94	29.94	29.96	30.02	30.06	30.12	29.99
WINDS	MEAN SPEED (MPH)	58	11.8	12.5	13.8	13.8	12.9	12.5	11.0	10.3	10.5	11.2	11.8	11.9	12.0
	PREVAIL. DIR (TENS OF DEGS)	23	36	36	18	16	16	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	6	38	45	39	55	45	49	48	55	43	38	39	37	55
	DIR. (TENS OF DEGS)		29	31	35	27	02	21	30	19	35	36	33	33	27
	YEAR OF OCCURRENCE		2000	2001	2002	1998	2001	1997	1998	1997	2001	1999	1998	2000	APR 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	6	48	52	49	68	62	60	60	67	49	47	45	48	68
DIR. (TENS OF DEGS)		29	31	30	27	33	20	29	19	35	35	33	32	27	
YEAR OF OCCURRENCE		2000	2001	1998	1998	2002	1997	1998	1997	2001	1999	1998	2000	APR 1998	
PRECIPITATION	NORMAL (IN)	30	0.97	1.13	1.41	1.67	2.83	3.06	1.70	2.63	2.91	2.90	1.30	1.27	23.78
	MAXIMUM MONTHLY (IN)	63	4.35	3.60	5.16	6.80	13.19	9.60	8.04	8.18	11.03	10.68	4.60	6.28	13.19
	YEAR OF OCCURRENCE		1968	1992	1979	1966	1957	1961	2002	1969	1974	1981	1968	1991	MAY 1957
	MINIMUM MONTHLY (IN)	63	T	0.00	0.03	T	0.15	T	T	0.00	T	0.00	0.00	T	0.00
	YEAR OF OCCURRENCE		1967	1999	1963	1961	1956	1994	1970	2000	1956	1952	1949	1972	AUG 2000
	MAXIMUM IN 24 HOURS (IN)	63	2.18	1.94	2.24	3.75	4.76	3.66	5.67	6.30	6.70	6.08	2.43	2.62	6.70
	YEAR OF OCCURRENCE		1961	1992	1998	1957	1990	1959	2002	1978	1961	1981	1975	1991	SEP 1961
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	4.5	5.1	5.1	5.8	7.5	6.0	5.0	6.2	6.8	5.5	4.6	4.8	66.9	
PRECIPITATION ≥ 1.00	30	0.2	0.1	0.3	0.5	0.9	0.9	0.7	0.8	0.9	0.7	0.3	0.2	6.5	
SNOWFALL	NORMAL (IN)	30	2.6	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.*	0.6	0.8	5.6	
	MAXIMUM MONTHLY (IN)	58	13.5	8.4	7.3	9.3	T	T	T	T	0.0	0.3	8.1	7.8	13.5
	YEAR OF OCCURRENCE		1973	1956	1970	1996	1995	1993	1995	1997	1993	1968	1983	1983	JAN 1973
	MAXIMUM IN 24 HOURS (IN)	58	7.5	4.5	6.1	9.3	T	T	T	T	0.0	0.3	5.3	4.2	9.3
	YEAR OF OCCURRENCE		1973	1979	1970	1996	1995	1993	1995	1997	1993	1976	1946	1946	APR 1996
	MAXIMUM SNOW DEPTH (IN)	49	22	13	9	0	0	0	0	0	0	0	7	11	22
	YEAR OF OCCURRENCE		1973	1963	1989								1976	1983	JAN 1973
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.9	

PRECIPITATION (inches) 2002 ABILENE, TX (ABI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	3.52	1.61	3.28	1.10	1.38	2.21	2.68	0.30	4.65	3.15	0.22	0.01	24.11
1974	0.18	0.57	0.72	3.44	0.72	1.03	2.20	5.61	11.03	5.06	1.75	1.14	33.45
1975	0.83	1.86	1.49	0.52	4.43	1.68	1.93	2.47	2.27	0.84	2.67	1.22	22.21
1976	0.02	0.08	0.25	3.70	1.04	0.68	4.27	1.47	3.97	6.24	0.63	0.18	22.53
1977	1.22	0.08	2.35	3.11	0.44	1.71	1.82	2.54	0.09	2.15	0.57	0.19	16.27
1978	0.62	1.26	0.17	1.00	1.50	1.24	0.72	6.70	2.36	1.49	0.94	0.28	18.28
1979	0.72	1.10	5.16	1.72	1.86	2.89	1.55	1.55	0.01	0.53	0.65	2.62	20.36
1980	0.77	0.72	0.69	0.17	5.00	1.14	0.24	1.62	6.30	0.71	1.62	1.69	20.67
1981	1.20	1.06	2.36	3.52	1.48	2.73	1.69	0.63	1.74	10.68	0.43	0.25	27.77
1982	1.00	1.20	0.43	0.38	6.87	3.98	1.50	1.12	1.09	0.74	1.72	1.28	21.31
1983	2.28	0.12	1.95	0.54	1.42	3.86	2.57	0.10	0.87	3.25	1.77	0.77	19.50
1984	0.98	0.46	0.47	0.20	0.42	1.70	0.97	3.24	3.55	5.15	2.11	3.08	22.33
1985	0.53	1.50	2.86	0.90	4.03	1.78	1.71	3.66	1.28	2.43	1.56	0.03	22.27
1986	0.01	1.51	0.50	0.99	4.03	4.49	3.54	2.45	1.71	7.46	3.24	2.05	31.98
1987	0.54	3.55	1.55	0.87	4.58	1.86	1.91	4.17	2.12	0.21	1.16	4.55	27.07
1988	0.05	0.37	0.54	2.09	2.93	3.75	1.76	1.18	1.74	1.01	T	0.80	16.22
1989	0.54	3.08	1.72	0.71	3.07	9.53	1.01	2.53	4.09	0.97	0.20	0.21	27.66
1990	1.94	2.36	2.43	4.57	5.06	0.36	4.27	0.77	4.79	1.73	2.26	0.81	31.35
1991	2.71	0.14	0.51	1.65	1.07	8.05	2.24	1.85	5.99	2.47	0.32	6.28	33.28
1992	1.87	3.60	0.83	2.02	3.51	4.81	2.70	1.99	1.79	1.19	2.57	1.00	27.88
1993	0.91	1.23	1.03	0.84	2.01	3.80	0.25	1.82	2.42	3.19	0.40	0.90	18.80
1994	1.10	0.76	0.08	3.43	9.03	T	0.59	2.15	3.80	3.07	3.39	1.04	28.44
1995	1.25	0.43	1.53	1.13	5.83	1.67	2.07	5.25	2.41	0.99	0.32	0.23	23.11
1996	0.70	0.04	1.26	2.56	1.93	2.61	1.92	6.92	6.02	2.56	2.44	T	28.96
1997	0.09	3.49	0.98	2.96	1.52	6.86	0.28	4.16	0.04	2.54	1.00	3.16	27.08
1998	1.17	0.68	3.19	0.35	0.72	1.97	1.31	0.46	0.07	1.52	1.06	1.37	13.87
1999	1.93	0.00	2.92	1.49	1.77	4.43	0.06	0.42	1.60	1.66	0.00	0.35	16.63
2000	0.17	0.44	0.88	0.64	2.59	5.48	0.01	0.00	1.08	7.01	2.91	0.91	22.12
2001	1.07	2.70	1.92	0.57	3.63	1.38	0.03	3.39	2.32	0.49	3.39	0.98	21.87
2002	0.47	1.16	4.01	0.46	3.24	0.81	8.04	1.07	2.05	4.37	0.93	1.33	27.94
POR= 117 YRS	0.96	1.09	1.27	2.28	3.73	2.80	1.99	2.23	2.57	2.63	1.34	1.11	24.00

WBAN : 13962

AVERAGE TEMPERATURE (°F) 2002 ABILENE, TX (ABI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	37.5	44.4	57.2	58.6	70.6	77.4	81.2	82.5	73.8	66.5	58.2	46.8	62.9
1974	42.8	51.2	62.6	65.6	76.0	80.8	84.4	78.7	66.3	64.6	51.7	44.4	64.1
1975	44.8	45.1	54.1	62.9	70.2	78.5	79.7	81.3	70.8	65.6	54.3	46.1	62.8
1976	42.4	56.0	56.5	64.8	68.2	78.9	77.7	81.6	73.5	56.9	45.6	42.5	62.1
1977	35.7	50.9	56.8	62.4	73.4	81.3	83.8	83.4	82.6	66.9	54.6	48.7	65.0
1978	34.5	38.7	55.0	70.3	76.3	83.3	89.0	82.3	77.3	66.9	55.3	43.3	64.4
1979	35.6	44.9	56.7	64.2	69.8	79.0	83.7	82.2	77.7	71.6	50.9	47.7	63.7
1980	45.2	47.9	54.8	63.9	72.1	84.4	89.4	86.1	77.7	64.9	52.6	49.3	65.7
1981	44.8	49.4	54.9	68.3	71.6	80.3	85.8	83.3	78.0	66.2	57.4	48.8	65.7
1982	44.8	44.7	58.3	62.9	72.1	78.8	84.1	85.6	77.6	65.9	54.4	45.8	64.6
1983	42.6	47.0	54.9	60.6	70.8	76.7	82.8	85.2	77.9	69.1	57.0	34.2	63.2
1984	39.5	49.9	55.3	63.6	75.3	83.1	83.7	83.1	73.1	63.8	52.7	48.8	64.3
1985	37.2	44.4	57.5	66.7	73.8	77.9	81.6	84.9	75.7	65.7	54.6	41.4	63.5
1986	47.9	50.8	60.6	68.6	73.9	79.3	84.3	81.8	77.4	63.5	51.2	43.9	65.3
1987	43.4	49.4	52.1	62.7	72.1	77.5	81.6	83.5	74.0	67.0	54.0	44.8	63.5
1988	41.7	45.2	55.4	64.0	71.1	78.9	81.7	83.9	76.3	66.4	57.9	47.4	64.2
1989	49.4	40.2	56.8	66.5	75.9	75.9	82.9	81.9	72.6	67.7	56.4	38.4	63.7
1990	50.0	53.0	56.4	62.8	72.1	84.9	79.7	82.1	76.8	64.5	57.1	42.9	65.2
1991	41.9	52.1	58.9	68.0	75.4	78.2	82.3	79.2	71.3	66.1	49.9	46.7	64.2
1992	43.1	50.6	58.8	64.9	69.4	78.2	81.1	78.0	76.0	68.7	51.5	47.8	64.0
1993	42.9	46.6	54.8	63.6	70.4	79.7	85.7	83.9	74.1	62.8	49.6	47.8	63.5
1994	44.1	46.8	57.5	64.0	70.2	83.2	83.8	82.6	72.9	65.9	55.1	47.9	64.5
1995	46.6	50.2	53.3	63.7	70.1	76.3	83.4	81.1	74.3	66.2	54.4	46.5	63.8
1996	43.2	51.4	52.2	63.1	78.6	80.2	84.4	80.0	72.2	64.6	53.3	48.9	64.3
1997	43.3	46.9	57.7	58.9	69.1	76.7	82.5	81.7	78.7	66.4	50.9	42.9	63.0
1998	48.8	49.1	53.5	62.5	79.2	83.8	87.6	83.8	81.2	69.4	56.9	45.0	66.7
1999	47.9	55.7	54.9	65.5	72.5	78.8	83.5	87.1	76.2	66.2	59.8	47.8	66.3
2000	49.2	55.8	60.3	67.7	79.4	78.3	85.7	86.9	78.5	67.0	48.1	39.6	66.4
2001	41.8	48.5	51.2	64.1	73.8	81.7	87.6	83.4	74.4	65.5	58.4	47.9	64.9
2002	47.9	45.7	54.3	67.4	72.2	79.4	79.7	83.6	75.8	60.9	51.1	46.2	63.7
POR= 117 YRS	44.1	48.1	56.0	64.9	72.5	79.9	83.4	82.9	76.1	65.9	54.0	45.9	64.5

HEATING DEGREE DAYS (base 65°F) 2002 ABILENE, TX (ABI)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0	0	6	60	227	557	680	389	181	78	7	0	2185
1974-75	0	0	60	67	400	631	620	553	351	144	7	0	2833
1975-76	0	0	55	97	327	578	692	276	296	68	39	0	2428
1976-77	0	0	11	276	575	690	901	393	262	89	0	0	3197
1977-78	0	0	0	56	314	500	938	730	337	37	34	0	2946
1978-79	0	0	5	56	308	667	906	567	272	84	55	0	2920
1979-80	0	0	0	43	429	530	605	496	316	118	10	0	2547
1980-81	0	0	16	116	389	485	619	439	312	51	20	0	2447
1981-82	0	0	7	116	237	496	617	570	253	149	22	0	2467
1982-83	0	0	0	111	340	589	686	497	325	209	23	4	2784
1983-84	0	0	9	37	261	947	781	431	310	107	12	0	2895
1984-85	0	0	65	108	375	501	853	572	259	52	3	0	2788
1985-86	0	0	28	70	328	725	522	409	162	38	9	0	2291
1986-87	0	0	1	102	413	647	663	429	396	159	1	0	2811
1987-88	0	0	0	45	347	618	715	567	324	103	10	0	2729
1988-89	0	0	3	33	248	539	477	690	310	116	4	0	2420
1989-90	0	0	40	92	286	820	460	334	293	123	58	0	2506
1990-91	0	0	3	104	258	680	711	358	224	22	12	0	2372
1991-92	0	0	33	110	448	562	672	408	200	88	30	0	2551
1992-93	0	0	0	20	413	530	677	509	328	125	24	0	2626
1993-94	0	0	10	174	459	524	640	502	272	123	30	0	2734
1994-95	0	0	14	103	307	521	563	408	387	131	17	0	2451
1995-96	0	0	30	64	314	574	673	422	414	138	0	0	2629
1996-97	0	0	22	86	360	497	674	499	244	206	36	0	2624
1997-98	0	0	0	105	417	677	497	438	389	130	0	0	2653
1998-99	0	0	0	47	246	615	524	269	312	98	14	0	2125
1999-00	0	0	18	87	171	531	483	269	180	85	8	0	1832
2000-01	0	0	23	89	501	783	712	459	421	91	3	0	3082
2001-02	0	0	9	66	223	527	529	533	361	88	16	0	2352
2002-	0	0	0	196	414	573							

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COOLING DEGREE DAYS (base 65°F) 2002 ABILENE, TX (ABI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	0	0	0	44	224	379	508	550	277	111	32	0	2125
1974	0	7	113	102	354	480	607	430	104	62	8	0	2267
1975	0	0	20	89	175	411	462	513	236	120	13	0	2039
1976	0	21	40	67	145	424	401	521	275	31	0	0	1925
1977	0	4	13	17	267	496	590	579	534	122	7	1	2630
1978	0	0	35	201	392	555	751	542	379	121	23	1	3000
1979	0	9	20	67	209	428	586	539	390	253	11	0	2512
1980	0	7	6	91	237	588	762	660	405	119	21	5	2901
1981	0	6	8	154	230	464	653	575	403	162	15	1	2671
1982	1	8	52	92	249	422	600	645	386	147	28	1	2631
1983	0	0	21	84	208	365	558	634	403	171	30	0	2474
1984	0	0	20	71	339	550	589	570	315	80	13	4	2551
1985	0	0	32	107	281	393	519	621	356	97	25	0	2431
1986	0	18	34	155	294	435	610	524	382	64	3	0	2519
1987	0	0	3	97	228	379	525	579	277	116	25	0	2229
1988	0	0	34	80	206	422	524	592	350	85	37	0	2330
1989	0	0	64	169	347	334	563	530	275	183	33	0	2498
1990	2	6	33	63	285	603	461	537	363	94	30	0	2477
1991	0	0	40	118	340	404	544	449	228	151	2	1	2277
1992	0	0	13	92	173	402	501	410	336	142	13	6	2088
1993	0	0	19	88	198	448	648	593	289	116	4	0	2403
1994	0	0	48	98	199	552	589	555	259	140	17	0	2457
1995	0	0	32	97	183	346	576	505	314	107	4	7	2171
1996	0	36	23	87	431	461	609	472	80	80	14	4	2297
1997	7	0	24	30	171	358	551	523	420	154	1	0	2239
1998	0	0	40	63	446	567	711	587	490	188	13	1	3106
1999	1	13	4	120	255	421	579	691	358	130	20	0	2592
2000	2	9	40	173	462	406	649	685	434	158	0	0	3018
2001	0	0	0	69	285	507	706	577	298	87	33	2	2564
2002	4	2	37	165	244	438	465	584	328	77	5	0	2349

SNOWFALL (inches) 2002 ABILENE, TX (ABI)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0.0	0.0	0.0	0.0	0.0	T	T	0.2	T	0.0	0.0	0.0	0.2
1974-75	0.0	0.0	0.0	0.0	0.0	T	6.0	1.6	T	0.0	0.0	0.0	7.6
1975-76	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	T	0.0	0.0	0.0	2.6
1976-77	0.0	0.0	0.0	0.0	5.6	0.0	3.9	0.0	0.0	0.0	0.0	0.0	9.5
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	1.0	0.0	0.0	0.0	4.1
1978-79	0.0	0.0	0.0	0.0	0.0	0.9	0.5	5.9	0.0	0.0	0.0	0.0	7.3
1979-80	0.0	0.0	0.0	0.0	0.0	0.3	T	2.2	T	0.0	0.0	0.0	2.5
1980-81	0.0	0.0	0.0	T	3.7	0.0	1.9	T	0.0	0.0	0.0	0.0	5.6
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.2	0.0	0.0	0.0	0.0	6.2
1982-83	0.0	0.0	0.0	0.0	T	1.4	10.8	T	T	0.0	0.0	0.0	12.2
1983-84	0.0	0.0	0.0	0.0	0.0	7.8	T	0.4	0.8	0.0	0.0	0.0	9.0
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	6.1	1.9	0.0	0.0	0.0	0.0	8.0
1985-86	0.0	0.0	0.0	0.0	0.0	0.2	0.0	T	0.0	0.0	0.0	0.0	0.2
1986-87	0.0	0.0	0.0	0.0	0.0	0.6	2.4	3.9	T	0.0	0.0	0.0	6.9
1987-88	0.0	0.0	0.0	0.0	0.0	3.3	T	2.0	0.0	0.0	0.0	0.0	5.3
1988-89	0.0	0.0	0.0	0.0	0.0	T	0.2	T	5.2	0.0	T	T	5.4
1989-90	0.0	0.0	0.0	0.0	0.0	T	T	T	T	0.0	T	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	2.6	1.6	0.0	T	T	0.0	T	4.2
1991-92	0.0	0.0	0.0	T	0.0	T	0.5	0.5	T	0.0	0.0	0.0	1.0
1992-93	T	0.0	0.0	0.0	2.8	T	T	T	0.3	0.0	T	T	3.1
1993-94	0.0	0.0	0.0	0.3	T	1.7	2.5	0.0	T	T	T	0.0	4.5
1994-95	0.0	0.0	0.0	0.0	T	0.0	6.2	0.0	T	0.0	T	0.0	6.2
1995-96	T	0.0	0.0	0.0	1.1	T	4.5	0.4	T	9.3			
1996-97					1.0	0.0	0.7	1.1	0.0	0.0	0.0	T	
1997-98	0.0	T											
1998-99													
1999-00													
2000-01													
2001-02													
2002-													
POR= 57 YRS	T	0.0	0.0	0.0	0.4	0.7	2.0	1.0	0.6	0.2	T	T	4.9

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REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). 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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## 2002 ABILENE, TEXAS (ABI)

Abilene is located in north central Texas. The station elevation is 1,750 feet above sea level. Topography of the area includes rolling plains, treeless except for mesquite, broken by low hills to the south and west. The land rises gently to the east and southeast. Regional agricultural products are mainly cattle, dry-land cotton, and feed crops.

Abilene is on the boundary between the humid east Texas climate and the semi-arid west and north Texas climate. The rainfall pattern is typical of the Great Plains. Most precipitation occurs from April to October and is usually associated with thunderstorms. Severe storms are infrequent, occurring mostly in the spring.

The large range of high and low temperatures, characteristic of the Great Plains, extends south to the Abilene area. High daytime temperatures prevail in the summer, but are normally broken by thunderstorms about five times a month. Rapid cooling after sunset results in pleasant nights with low summertime temperatures in the upper 60s and low 70s. High summer temperatures are usually associated with fair skies, southwesterly winds, and low humidities.

Rapid wintertime temperature changes occur when cold, dry, arctic air replaces warm moist tropical air. Drops in temperature of 20 to 30 degrees in one hour are not unusual. However, cold weather periods are short lived. Fair, mild weather is typical.

South is the prevailing wind direction, and southerly winds are frequently high and persist for several days. Strong northerly winds often occur during the passage of cold fronts. Dusty conditions are infrequent, occurring mostly with westerly winds. Dust storm frequency and intensity depend on soil conditions in eastern New Mexico, west Texas, and the Texas Panhandle.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is November 13 and the average last occurrence in the spring is March 25.

# STATION LOCATION

ABILENE, TEXAS

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS  REMARKS
						SEA LEVEL		GROUND									
						GROUND	TEMPERATURE	WIND INSTRUMENT	EXTREME THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE BUCKET	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROMETER		
*NOTE: <u>AIRPORT</u> Municipal Airport 3-1/2 miles SE of P.O.	7/2/35	12/11/53	NA	32°26'	99°41'	1751	59	4	4	* Unk	2	4	3		WBO and WBAS consolidated 4/1/44 * - Installed March 1948?		
Municipal Airport	12/11/53	10/15/71	0.5mi.S	32°26'	99°41'	1759 d1762	60 a32 b20	5	5	10	4	4	4	c4	a. Effective 11/11/57. b. Effective 5/5/60. c. Commissioned 900' south of thermometer site 8/1/63. d. Effective 8/1/63.		
FAA Control Tower Municipal Airport	10/15/71	05/01/96	1.25mi. SSE	32°25'	99°41'	1784	e21	6	6	10 f8	4	4	4	e4 g5	NA e. One mile SSE of previous site. f. Effective 10/27/71. g. New type at same site 5/11/78.		
Municipal Airport	05/01/96	Present	NA	32°25'	99°41'	h1789								S	ASOS commissioned 05/01/96 h. Ground elevation		

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\* NOTES: For earlier station history see previous edition.