

2002

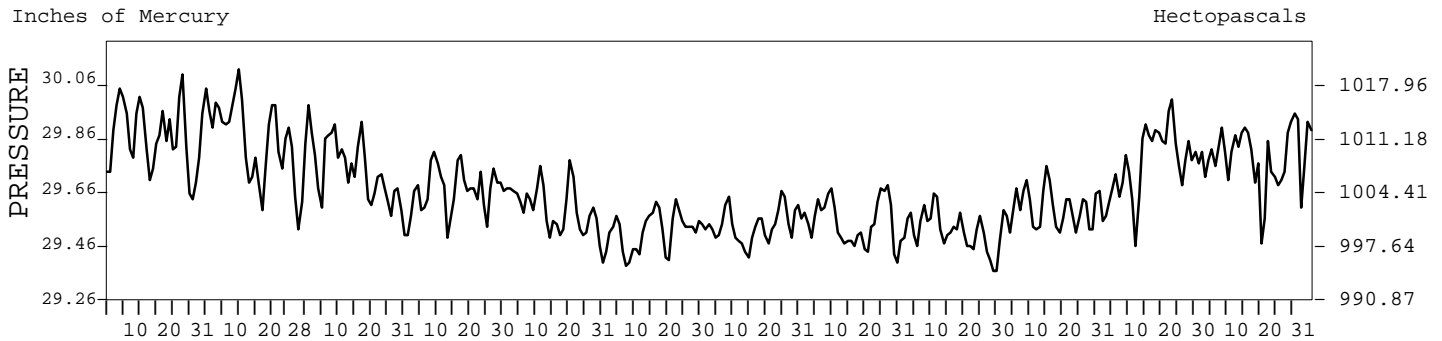
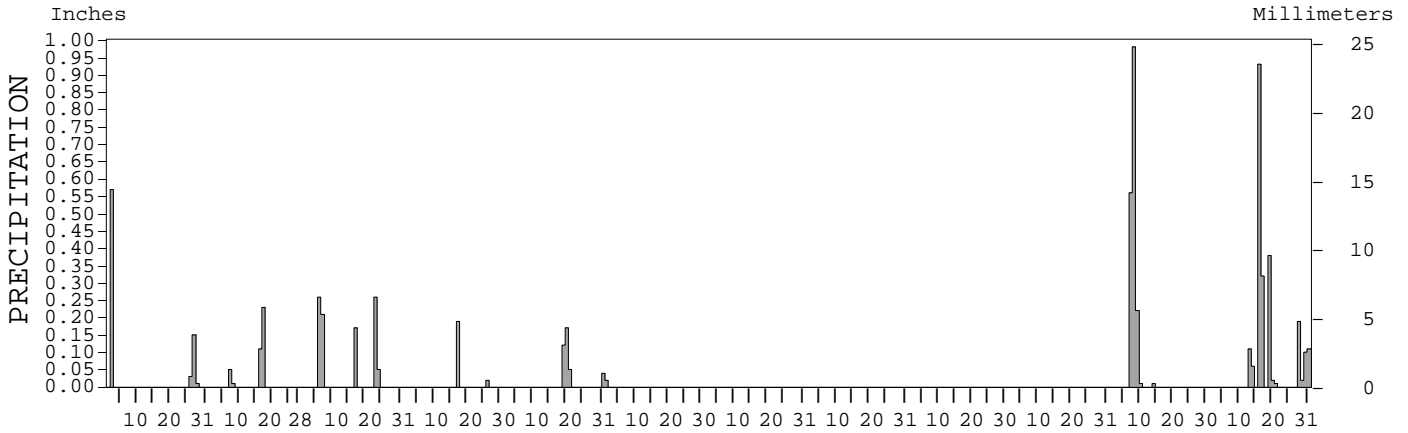
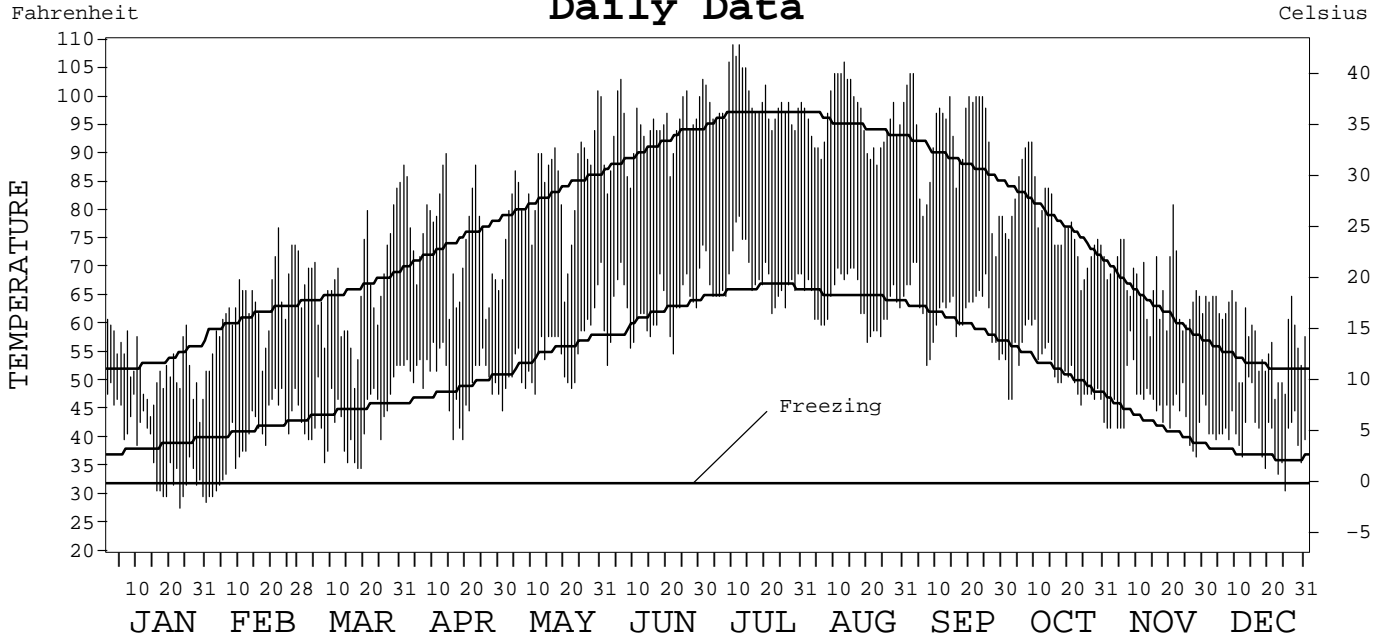
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-0890

FRESNO, CALIFORNIA (FAT)

Daily Data



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 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE
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 NATIONAL CLIMATIC DATA CENTER
 ASHEVILLE, NORTH CAROLINA
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2002

FRESNO, CA (FAT)

LATITUDE: 36° 46' 48" N LONGITUDE: 119° 43' 10" W ELEVATION (FT): GRND: 372 BARO: 375 TIME ZONE: PACIFIC (UTC + 8) WBAN: 93193

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	52.4	63.8	66.8	75.1	84.1	93.7	99.5	96.1	92.0	78.3	66.7	57.9	77.2	
	HIGHEST DAILY MAXIMUM	61	77	85	90	101	103	109	106	104	92	81	66	109	
	DATE OF OCCURRENCE	01	22	31	14	30	06	12+	13	03+	09+	21	09	JUL 12+	
	MEAN DAILY MINIMUM	37.6	40.5	43.3	50.4	55.0	62.4	68.6	63.9	62.1	52.1	45.7	40.7	51.9	
	LOWEST DAILY MINIMUM	28	30	35	40	45	53	62	57	53	43	37	31	28	
	DATE OF OCCURRENCE	23	02+	19+	19+	01	02	22	20	07	31	28	25	JAN 23	
	AVERAGE DRY BULB	45.0	52.2	55.1	62.8	69.6	78.1	84.1	80.0	77.1	65.2	56.2	49.3	64.6	
	MEAN WET BULB	42.3	47.2	48.0	53.2	55.9	61.7	66.1	63.5	62.6	55.3	50.9	46.1	54.4	
	MEAN DEW POINT	39.3	42.8	40.8	44.6	43.9	49.2	54.8	52.6	53.1	47.1	46.7	42.9	46.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	1	9	24	31	28	19	3	0	0	0	115
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	11	4	0	0	0	0	0	0	0	0	0	1	16	
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	610	352	310	109	30	0	0	0	0	67	256	477	2211	
	COOLING DEGREE DAYS	0	0	9	50	180	400	599	472	372	81	0	0	2163	
RH	MEAN (PERCENT)	83	74	63	56	44	40	40	43	47	57	77	81	59	
	HOUR 04 LST	93	91	82	77	67	60	60	68	67	76	88	89	76	
	HOUR 10 LST	83	74	57	51	40	34	36	37	40	51	75	78	55	
	HOUR 16 LST	67	49	40	34	23	20	21	20	28	34	55	65	38	
	HOUR 22 LST	88	79	68	60	45	44	43	45	52	63	83	87	63	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	10	4	0	0	0	0	0	0	0	0	10	5	29	
	THUNDERSTORMS	0	1	1	0	2	0	0	0	0	0	0	1	5	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.85	29.84	29.73	29.65	29.58	29.51	29.53	29.53	29.51	29.59	29.76	29.78	29.65	
	MEAN SEA-LEVEL PRESS. (IN.)	30.20	30.19	30.08	29.99	29.93	29.84	29.86	29.87	29.84	29.93	30.11	30.13	30.00	
WINDS	RESULTANT SPEED (MPH)	0.1	0.9	1.6	5.2	2.4	2.2	0.4	0.3	3.1	1.8	0.5	2.4	0.6	
	RES. DIR. (TENS OF DEGS.)	31	34	32	32	18	18	12	32	31	31	10	12	30	
	MEAN SPEED (MPH)	4.1	4.1	6.1	7.5	8.4	9.1	7.6	6.6	5.8	4.3	3.7	4.5	6.0	
	PREVAIL. DIR. (TENS OF DEGS.)	30	32	31	31	31	31	30	31	31	30	32	12	31	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	20	24	30	35	23	23	23	21	25	23	22	29	35	
	DIR. (TENS OF DEGS.)	31	30	29	31	31	30	30	31	32	30	13	14	31	
	DATE OF OCCURRENCE	22	08	07	14	18	18+	02	05	15	01	07	31	APR 14	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	24	28	35	41	32	26	26	23	31	26	25	33	41	
DIR. (TENS OF DEGS.)	31	31	29	32	31	32	31	27	32	30	12	25	32		
DATE OF OCCURRENCE	22	23	07	14	18	08	02	24+	15	01	07	28	APR 14		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.76	0.40	0.95	0.21	0.38	0.02	0.00	0.00	T	0.00	1.78	2.25	6.75	
	GREATEST 24-HOUR (IN.)	0.57	0.34	0.31	0.19	0.29	0.02	0.00	0.00	T	0.00	1.12	0.95	1.12	
	DATE OF OCCURRENCE	02	16-17	23-24	17	19-20	01			06+		07-08	16-17	NOV 07-08	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	4	4	5	2	4	1	0	0	0	0	5	11	36	
PRECIPITATION ≥ 0.10	2	2	4	1	2	0	0	0	0	0	3	7	21		
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														
	MAXIMUM SNOW DEPTH (IN.)														
DATE OF OCCURRENCE															
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

FRESNO, CA (FAT)

LATITUDE: 36° 46' 48" N LONGITUDE: 119° 43' 10" W ELEVATION (FT): GRND: 372 BARO: 375 TIME ZONE: PACIFIC (UTC + 8) WBAN: 93193

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	53.6	61.3	66.1	74.0	82.7	90.9	96.6	94.8	88.8	78.1	63.0	53.4	75.3
	MEAN DAILY MAXIMUM	53	54.4	61.5	66.8	74.6	83.4	91.5	98.0	96.2	90.4	79.9	65.3	54.7	76.4
	HIGHEST DAILY MAXIMUM	53	78	80	90	100	107	110	112	112	111	102	89	76	112
	YEAR OF OCCURRENCE		1986	1991	1972	1981	1984	1964	1991	1996	1955	1980	1949	1958	AUG 1996
	MEAN OF EXTREME MAXS.	53	67.4	73.3	80.0	89.7	98.4	104.5	106.7	105.5	101.9	93.9	79.5	67.2	89.0
	NORMAL DAILY MINIMUM	30	38.4	41.4	44.9	48.4	54.9	61.2	66.1	64.9	60.4	51.9	42.3	37.0	51.0
	MEAN DAILY MINIMUM	53	37.6	40.5	43.5	47.8	54.0	60.1	65.2	63.7	59.3	50.9	42.3	37.1	50.2
	LOWEST DAILY MINIMUM	53	19	24	26	32	36	44	50	49	37	27	26	18	18
	YEAR OF OCCURRENCE		1963	1990	1966	1982	1975	1955	1955	1966	1950	1972	1975	1990	DEC 1990
	MEAN OF EXTREME MINS.	53	27.4	31.0	33.9	38.5	44.0	50.9	56.5	56.0	50.5	40.8	32.3	27.8	40.8
	NORMAL DRY BULB	30	45.7	51.2	55.1	61.2	69.0	76.6	81.9	80.3	74.5	65.2	53.6	45.4	63.3
	MEAN DRY BULB	53	46.1	51.2	55.1	61.2	68.7	75.7	81.5	79.9	74.8	65.5	53.8	45.7	63.3
	MEAN WET BULB	18	43.8	47.3	50.7	53.4	57.0	61.8	65.5	60.9	61.9	56.1	48.7	42.7	54.1
	MEAN DEW POINT	18	40.9	43.0	45.2	44.8	43.8	47.4	54.5	50.6	52.3	48.1	44.0	39.6	46.2
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	*	2.1	9.4	19.5	28.5	26.3	16.9	4.2	0.0	0.0	106.9	
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	0.1	0.1	
MINIMUM ≤ 32°	30	8.5	3.1	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.0	8.9	23.4	
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	578	377	283	140	37	4	0	0	3	73	354	598	2447
	NORMAL COOLING DEG. DAYS	30	0	0	3	40	170	351	524	478	307	89	1	0	1963
RH	NORMAL (PERCENT)	30	83	77	69	57	47	42	39	45	50	58	74	84	60
	HOUR 04 LST	30	91	90	86	80	72	64	60	67	72	78	87	92	78
	HOUR 10 LST	30	84	77	65	51	43	39	37	42	45	52	71	85	58
	HOUR 16 LST	30	67	56	46	34	26	23	21	25	28	34	54	69	40
	HOUR 22 LST	30	88	83	74	62	50	43	40	46	52	64	81	89	64
S	PERCENT POSSIBLE SUNSHINE	46	47	65	77	85	90	95	97	96	94	88	66	46	79
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	53	11.7	5.8	1.7	0.3	0.1	0.0	0.0	0.0	0.1	0.9	5.5	11.4	37.5
	THUNDERSTORMS	53	0.3	0.4	0.9	0.5	0.6	0.4	0.3	0.2	0.7	0.5	0.2	0.3	5.3
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	1		3.0	5.0		6.0	4.0							
	PARTLY CLOUDY	1		1.0			1.0								
	CLOUDY	1	2.0	3.0	1.0		1.0								
PR	MEAN STATION PRESSURE (IN)	29	29.80	29.71	29.70	29.70	29.60	29.50	29.50	29.50	29.60	29.60	29.79	29.80	29.65
	MEAN SEA-LEVEL PRES. (IN)	18	30.15	30.10	30.04	30.00	29.93	29.98	29.88	29.88	29.89	29.98	30.10	30.16	30.01
WINDS	MEAN SPEED (MPH)	41	5.2	5.7	6.7	7.4	8.2	8.3	7.4	6.8	6.1	5.2	4.7	4.8	6.4
	PREVAIL. DIR (TENS OF DEGS)	27	13	13	32	31	31	31	30	30	30	30	30	13	31
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	7	29	36	30	36	32	28	23	25	26	26	30	29	36
	DIR. (TENS OF DEGS)		09	13	29	29	32	30	30	30	30	31	28	14	29
	YEAR OF OCCURRENCE		2001	1998	2002	1999	1998	1999	2002	1999	1996	2000	2001	2002	APR 1999
	MAXIMUM 5-SECOND:														
SPEED (MPH)	7	41	43	37	41	37	32	30	30	31	35	37	33	43	
DIR. (TENS OF DEGS)		31	29	29	32	32	30	30	31	32	31	29	25	29	
YEAR OF OCCURRENCE		1998	1999	1997	2002	1998	1998	2001	1999	2002	1998	2001	2002	FEB 1999	
PRECIPITATION	NORMAL (IN)	30	2.16	2.12	2.20	0.76	0.39	0.23	0.01	0.01	0.26	0.65	1.10	1.34	11.23
	MAXIMUM MONTHLY (IN)	53	8.56	6.12	7.24	4.41	1.65	1.93	0.22	0.25	1.19	2.45	3.50	6.73	8.56
	YEAR OF OCCURRENCE		1969	2000	1991	1967	1990	1998	1992	1964	1976	2000	1972	1955	JAN 1969
	MINIMUM MONTHLY (IN)	53	0.04	T	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	YEAR OF OCCURRENCE		1976	1964	1972	1997	1982	1983	1983	1981	1981	1978	1959	1989	DEC 1989
	MAXIMUM IN 24 HOURS (IN)	53	2.59	1.99	2.43	1.39	1.42	1.80	0.22	0.25	0.97	1.76	1.35	1.76	2.59
	YEAR OF OCCURRENCE		1969	1969	1995	1983	1990	1998	1992	1964	1978	1992	1953	1955	JAN 1969
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.8	7.0	7.3	4.2	1.6	0.7	0.2	0.4	1.1	2.3	6.2	6.7	44.5	
PRECIPITATION ≥ 1.00	30	0.2	0.3	0.1	0.1	*	0.0	0.0	0.0	0.0	*	0.0	0.1	0.8	
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.*	0.0
	MAXIMUM MONTHLY (IN)	47	2.2	T	T	0.0	0.0	T	0.0	0.0	0.0	T	0.0	1.2	2.2
	YEAR OF OCCURRENCE		1962	1994	1991			1995				1974		1968	JAN 1962
	MAXIMUM IN 24 HOURS (IN)	47	1.5	T	T	0.0	0.0	T	0.0	0.0	0.0	T	0.0	1.2	1.5
	YEAR OF OCCURRENCE		1962	1994	1991			1995				1974		1968	JAN 1962
	MAXIMUM SNOW DEPTH (IN)	46	0	0	0	0	0	0	0	0	0	0	0	1	1
	YEAR OF OCCURRENCE													1968	DEC 1968
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) 2002 FRESNO, CA (FAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	1.91	3.69	2.84	0.09	T	T	0.00	T	0.00	1.02	1.39	1.74	12.68
1974	2.82	0.25	2.56	0.64	0.00	0.00	T	T	0.00	1.44	0.34	1.26	9.31
1975	0.69	0.97	2.44	0.55	T	0.00	T	0.05	0.22	1.07	0.20	0.14	6.33
1976	0.04	4.72	0.44	0.93	T	0.37	0.01	0.21	1.19	1.55	0.87	0.71	11.04
1977	0.68	0.09	1.04	0.04	1.16	0.06	T	T	T	0.01	0.46	3.02	6.56
1978	3.16	4.41	4.25	2.85	0.00	0.00	T	T	1.05	0.00	1.34	0.62	17.68
1979	2.71	2.53	2.27	0.07	0.06	0.00	0.08	0.00	T	0.48	1.01	0.74	9.95
1980	3.83	3.30	2.05	0.25	0.18	T	0.01	0.00	0.00	0.03	0.14	0.49	10.28
1981	2.67	1.29	2.59	1.01	T	0.00	0.00	0.00	0.00	0.58	1.22	0.65	10.01
1982	2.11	0.58	4.76	0.89	0.00	0.31	0.00	T	1.10	1.58	3.16	1.59	16.08
1983	5.14	3.70	4.53	2.76	0.01	0.00	0.00	0.09	1.03	0.09	2.51	1.75	21.61
1984	0.15	1.05	0.48	0.25	0.02	0.20	T	T	0.00	0.70	1.94	1.98	6.77
1985	0.43	0.71	1.73	0.12	0.00	0.33	0.04	0.02	0.43	0.85	3.02	0.72	8.40
1986	2.12	3.66	3.42	0.36	0.16	0.00	T	0.00	0.38	0.00	0.01	2.30	12.41
1987	1.93	1.36	2.39	0.07	0.87	0.01	0.00	0.00	T	0.85	0.52	1.19	9.19
1988	1.52	0.83	0.27	2.41	0.45	0.03	0.00	0.00	0.00	0.00	1.42	2.46	9.39
1989	0.48	1.18	2.25	0.05	0.89	0.00	0.00	0.03	1.11	0.42	0.50	0.00	6.91
1990	2.82	1.33	0.67	0.92	1.65	0.00	T	0.00	0.15	0.05	0.46	0.68	8.73
1991	0.13	1.01	7.24	0.02	0.03	T	0.00	T	T	0.80	0.04	1.22	10.49
1992	1.94	4.73	2.14	0.18	T	T	0.22	T	T	2.19	T	2.68	14.08
1993	5.18	2.44	1.76	0.20	0.25	1.61	0.00	0.00	0.00	0.12	1.16	1.03	13.75
1994	1.15	1.92	0.52	1.36	1.30	0.00	T	0.00	0.20	0.77	1.57	1.33	10.12
1995	5.42	0.93	5.88	1.08	1.19	0.66	0.01	T	0.00	0.00	T	2.12	17.29
1996	2.07	3.57	1.52	1.17	0.38	0.08	T	0.00	0.00	1.97	1.94	4.27	16.97
1997	3.53	0.17	0.10	T	T	0.01	T	0.00	0.15	0.07	2.66	0.99	7.68
1998	3.40	4.89	3.44	1.26	1.37	1.93	0.00	0.00	0.15	0.16	0.43	0.62	17.65
1999	2.82	1.18	0.49	0.93	0.03	0.20	0.00	0.01	T	T	0.48	0.03	6.17
2000	3.15	6.12	1.35	1.16	0.05	0.56	0.00	T	0.32	2.45	0.01	0.07	15.24
2001	2.66	2.22	0.96	1.87	0.00	0.00	0.08	0.00	T	0.29	1.99	1.95	12.02
2002	0.76	0.40	0.95	0.21	0.38	0.02	0.00	0.00	T	0.00	1.78	2.25	6.75
POR= 125 YRS	2.04	1.93	1.88	0.97	0.35	0.17	0.02	0.02	0.16	0.57	1.10	1.65	10.86

WBAN : 93193

AVERAGE TEMPERATURE (°F) 2002 FRESNO, CA (FAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	45.1	51.9	50.4	61.2	72.9	78.6	80.4	78.5	72.0	63.3	52.9	47.2	62.9
1974	47.9	49.1	56.3	60.0	69.5	77.7	81.3	79.3	77.5	66.0	53.1	44.5	63.5
1975	43.4	49.9	51.5	53.9	68.4	74.7	78.1	75.9	75.8	61.4	49.5	43.9	60.5
1976	44.3	49.6	52.4	57.2	69.7	72.9	79.4	72.7	72.2	65.1	53.4	46.5	61.3
1977	44.3	53.5	52.4	65.5	63.6	79.8	81.5	80.6	74.0	66.8	54.6	51.3	64.0
1978	51.4	52.6	60.3	58.9	69.9	76.3	82.4	81.4	73.0	70.0	52.1	42.8	64.3
1979	47.0	51.4	57.4	62.7	71.1	77.9	82.2	79.9	79.5	67.8	54.0	46.9	64.8
1980	49.4	53.8	53.7	61.8	67.2	73.7	84.0	80.7	75.6	68.4	54.2	46.8	64.1
1981	47.9	52.0	54.5	63.2	70.9	82.8	84.9	82.9	76.5	61.4	55.5	47.7	65.0
1982	41.7	50.5	51.4	58.0	69.3	72.9	81.0	80.4	72.3	65.0	51.1	45.4	61.6
1983	45.2	53.1	55.9	57.9	69.7	76.3	79.0	82.1	78.8	68.5	54.6	51.1	64.3
1984	47.8	50.7	58.4	60.8	74.8	77.5	87.0	83.5	81.0	62.4	53.6	46.5	65.3
1985	43.3	51.3	53.1	67.2	69.4	81.8	86.0	80.5	72.3	65.0	52.5	43.8	63.9
1986	53.6	55.7	60.3	62.7	71.2	79.4	81.9	84.2	71.3	66.9	56.7	47.5	66.0
1987	45.3	52.8	55.6	66.7	71.8	78.4	77.0	80.2	75.5	70.1	52.3	44.2	64.2
1988	46.0	52.2	56.8	61.6	67.0	75.6	85.5	81.2	76.4	68.7	54.3	44.5	64.2
1989	42.9	48.8	57.9	67.3	69.6	77.0	82.5	79.3	74.3	65.3	54.3	43.8	63.6
1990	45.5	48.0	57.3	65.7	68.1	76.8	84.0	80.6	75.8	67.7	52.9	41.5	63.7
1991	47.0	55.8	51.5	59.5	66.1	74.7	83.8	78.6	79.9	70.5	55.8	47.0	64.2
1992	42.7	55.5	58.8	66.8	76.0	77.0	81.3	83.2	77.0	68.6	54.3	45.3	65.5
1993	47.1	51.9	60.3	61.7	69.9	75.7	80.2	79.7	75.7	67.8	53.9	45.6	64.1
1994	46.9	49.9	59.3	63.2	68.5	77.7	83.3	82.3	75.4	64.8	48.1	45.3	63.7
1995	51.9	54.1	56.2	60.7	66.2	73.3	80.7	82.6	76.3	66.8	58.7	50.5	64.8
1996	48.3	54.2	57.2	63.6	69.9	77.8	85.4	83.4	74.8	64.1	53.9	49.1	65.1
1997	48.7	50.3	60.0	63.5	75.3	75.8	81.3	80.6	77.3	63.8	56.9	44.7	64.9
1998	49.0	50.0	55.5	59.0	62.0	71.5	82.1	84.1	75.8	63.1	53.1	42.8	62.3
1999	44.7	49.9	53.5	58.5	68.0	75.9	80.6	78.4	77.3	68.7	56.9	47.0	63.3
2000	50.2	53.8	56.5	64.2	71.0	79.8	78.8	81.2	74.5	63.9	49.2	47.8	64.2
2001	46.2	48.7	58.8	58.6	77.3	79.7	81.6	81.9	77.0	68.5	56.4	47.4	65.2
2002	45.0	52.2	55.1	62.8	69.6	78.1	84.1	80.0	77.1	65.2	56.2	49.3	64.6
POR= 115 YRS	45.9	51.2	55.2	61.1	68.2	75.5	81.8	80.0	74.2	65.0	54.2	46.2	63.2

HEATING DEGREE DAYS (base 65°F) 2002 FRESNO, CA (FAT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0	0	0	94	360	544	522	438	260	160	33	0	2411
1974-75	0	0	0	59	350	628	661	419	409	325	53	3	2907
1975-76	0	0	0	154	455	648	636	440	385	242	10	9	2979
1976-77	0	1	5	63	342	566	636	313	386	42	98	0	2452
1977-78	0	0	0	46	302	417	415	343	143	182	19	0	1867
1978-79	0	0	6	30	382	682	549	372	234	96	34	0	2385
1979-80	0	0	0	56	323	555	473	318	343	129	46	0	2243
1980-81	0	0	0	69	318	553	521	359	316	114	9	0	2259
1981-82	0	0	0	118	278	530	711	398	412	217	21	4	2689
1982-83	0	0	13	62	411	602	607	327	276	206	55	0	2559
1983-84	0	0	1	3	304	421	530	408	198	149	6	0	2020
1984-85	0	0	0	128	335	566	664	378	361	39	8	3	2482
1985-86	0	0	0	63	369	651	345	258	156	98	30	0	1970
1986-87	0	0	13	22	242	537	602	337	282	56	26	0	2117
1987-88	0	0	0	7	374	636	583	366	251	124	69	12	2422
1988-89	0	0	0	20	316	629	679	450	213	52	14	0	2373
1989-90	0	0	7	73	310	649	598	470	236	35	19	1	2398
1990-91	0	0	0	17	356	722	549	253	412	163	65	0	2537
1991-92	0	0	0	81	276	551	683	267	183	25	0	1	2067
1992-93	0	0	0	18	316	602	549	359	145	113	9	12	2123
1993-94	0	0	0	12	326	595	553	414	168	97	37	0	2202
1994-95	0	0	0	58	500	602	398	298	269	146	60	16	2347
1995-96	0	0	0	30	184	444	513	304	238	99	8	0	1820
1996-97	0	0	0	148	329	486	500	405	169	97	2	0	2136
1997-98	0	0	0	92	246	621	490	412	293	226	104	7	2491
1998-99	0	0	7	79	351	682	619	418	348	227	35	12	2778
1999-00	0	0	0	14	235	550	452	317	259	72	27	3	1929
2000-01	0	0	0	103	466	526	577	451	208	222	0	0	2553
2001-02	0	0	0	23	251	538	610	352	310	109	30	0	2223
2002-	0	0	0	67	256	477							

WBAN : 93193

COOLING DEGREE DAYS (base 65°F) 2002 FRESNO, CA (FAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	0	0	0	32	264	419	484	423	218	47	4	0	1891
1974	0	0	0	20	179	384	512	448	381	96	0	0	2020
1975	0	0	0	0	164	303	413	344	329	49	0	0	1602
1976	0	0	2	16	162	254	456	246	228	73	0	0	1437
1977	0	0	0	62	60	451	518	494	275	108	0	0	1968
1978	0	0	3	6	179	342	546	516	250	187	0	0	2029
1979	0	0	2	37	229	396	541	471	442	149	0	0	2267
1980	0	0	0	39	120	265	594	493	326	181	0	0	2018
1981	0	0	0	67	200	545	622	562	352	14	0	0	2362
1982	0	0	0	12	162	251	501	483	240	70	0	0	1719
1983	0	0	0	0	207	343	440	537	422	119	0	0	2068
1984	0	0	1	30	318	382	688	581	487	55	0	0	2542
1985	0	0	0	111	153	516	657	487	227	69	2	0	2222
1986	0	1	18	34	231	440	530	603	206	87	0	0	2150
1987	0	0	0	114	243	409	379	480	323	172	0	0	2120
1988	0	0	3	28	139	338	642	511	349	143	3	0	2156
1989	0	0	4	129	166	366	546	449	291	90	0	0	2041
1990	0	0	2	61	122	360	595	490	333	108	0	0	2071
1991	0	0	0	6	107	298	588	428	454	259	5	0	2145
1992	0	0	0	88	350	366	511	572	365	135	0	0	2387
1993	0	0	3	20	168	342	476	462	331	105	0	0	1907
1994	0	0	1	52	151	389	576	547	318	59	0	0	2093
1995	0	0	0	25	104	273	494	551	347	91	0	0	1885
1996	0	0	4	66	162	389	640	579	300	125	0	0	2265
1997	0	0	18	61	330	334	514	492	373	61	11	0	2194
1998	0	0	6	50	18	210	536	600	338	25	0	0	1783
1999	0	0	0	39	135	348	487	423	373	135	0	0	1940
2000	0	0	0	54	217	454	434	509	291	81	0	0	2040
2001	0	0	20	37	389	447	521	533	365	137	0	0	2449
2002	0	0	9	50	180	400	599	472	372	81	0	0	2163

SNOWFALL (inches) 2002 FRESNO, CA (FAT)

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974-75	0.0	0.0	0.0	T	0.0	0.0	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	T	0.0	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	T	T	0.0	0.0	0.0	T
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	0.0	0.0	0.0	0.0	0.0	0.0
1985-86	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
1986-87	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
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	T	0.0	0.0	0.0	0.0	T
1989-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	T
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1992-93	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
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	T	0.0	0.0	0.0	0.0	T	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1996-97													
1997-98													
1998-99						0.5							
1999-00													
2000-01													
2001-02													
2002-													
POR= 46 YRS	0.0	0.0	0.0	T	0.0	T	0.0	T	T	0.0	0.0	T	T

WBAN : 93193

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 FRESNO, CALIFORNIA (FAT)

Fresno is located about midway and toward the eastern edge of the San Joaquin Valley, which is oriented northwest to southeast and has a length of about 225 miles and an average width of 50 miles. The San Joaquin Valley is generally flat. About 15 miles east of Fresno the terrain slopes upward with the foothills of the Sierra Nevada. The Sierra Nevada attain an elevation of more than 14,000 feet 50 miles east of Fresno. West of the city 45 miles lie the foothills of the Coastal Range.

The climate of Fresno is dry and mild in winter and hot in summer. Nearly nine-tenths of the annual precipitation falls in the six months from November to April.

Due to clear skies during the summer and the protection of the San Joaquin Valley from marine effects, the normal daily maximum temperature reaches the high 90s during the latter part of July. The daily maximum temperature during the warmest month has ranged from 76 to 115 degrees. Low relative humidities and some wind movement substantially lower the sensible temperature during periods of high readings. Humidity readings of 15 percent are common on summer afternoons, and readings as low as 8 percent have been recorded. In contrast to this, humidity readings average 90 percent during the morning hours of December and January.

Winds flow with the major axis of the San Joaquin Valley, generally from the northwest. This feature is especially beneficial since, during the warmest months, the northwest winds increase during the evenings. These refreshing breezes and the normally large temperature variation of about 35 degrees between the highest and lowest readings of the day, generally result in comfortable evening and night temperatures.

Winter temperatures are usually mild with infrequent cold spells dropping the readings below freezing. Heavy frost occurs almost every year, and the first frost usually occurs during the last week of November. The last frost in spring is usually in early March, however, one year in five will have the last frost after the first of April. The growing season is 291 days.

Although the heaviest rains recorded at Fresno for short periods have occurred in June, usually any rainfall during the summer is very light. Snow is a rare occurrence in Fresno.

Fresno enjoys a very high percentage of sunshine, receiving more than 80 percent of the possible amounts during all but the four months of November, December, January, and February. Reduction of sunshine during these months is caused by fog and short periods of stormy weather.

During foggy periods, at times lasting nearly two weeks, sunshine is reduced to a minimum. This fog frequently lifts to a few hundred feet above the surface of the valley and presents the appearance of a heavy, solid cloud layer.

Spring and autumn are very enjoyable seasons in Fresno, with clear skies, light rainfall and winds and mild temperatures.

STATION LOCATION

FRESNO, CALIFORNIA

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
						GROUND									
						SEA LEVEL	WIND INSTRUMENT	EXTREME THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE		
*NOTE: <u>AIRPORT</u>															
Fresno Air Terminal SW corner Shields and Clovis Avenue	8/20/49	9/1/61	7 mi. ENE	36°47'	119°42'	331	42	6	6	Unk	3		3		f. Effective 10/16/61. g. Minor adjustment 9/14/62. h. Commissioned 4800' ESE of thermometer site 11/13/63.
Fresno Air Terminal	9/1/61	09/01/95	0.9 mi. W	36°46'	119°43'	326 i328	20 j20	5	5	Unk f11	5 5		3 g5	h4 j4 k4	i. Effective 4/24/64. j. Moved 750' WNW 5/24/64. k. Type change 9/3/82. m. Minor adjustment & type change 2/18/87.
Fresno Air Terminal	09/01/95	Present	NA	36°47'	119°43'	n372								S	n. ASOS Commissioned 09/01/95 Ground elevation.

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* NOTES: For earlier station history see previous editions.