

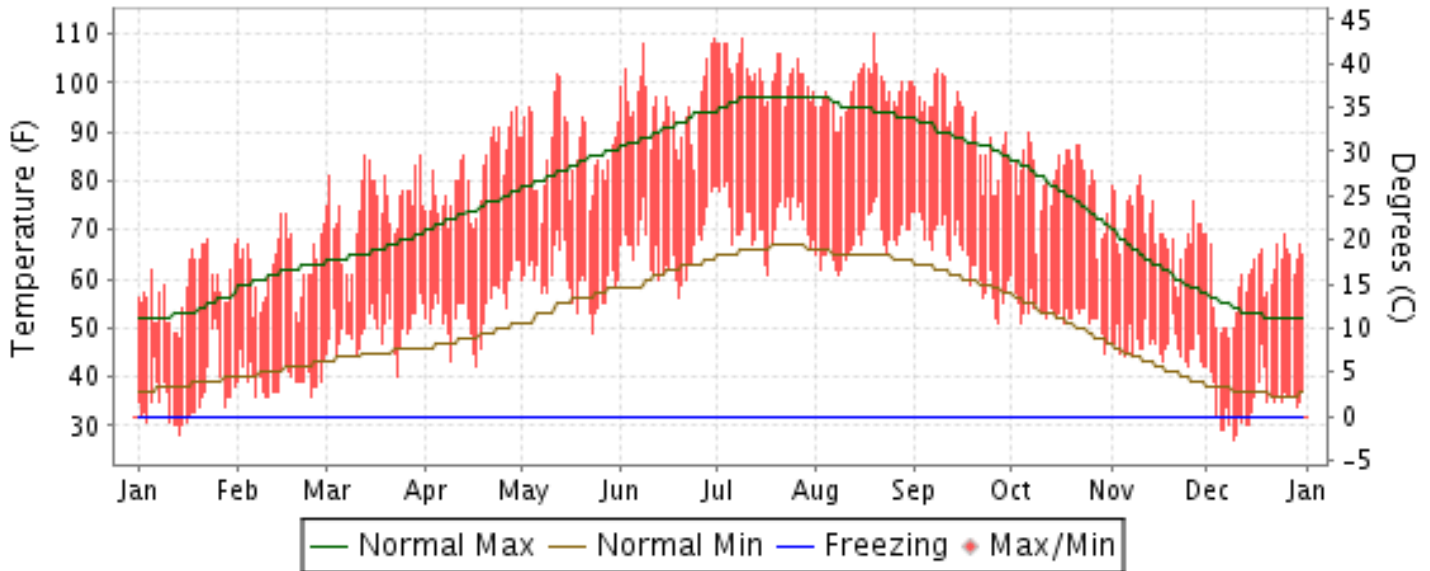


# 2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

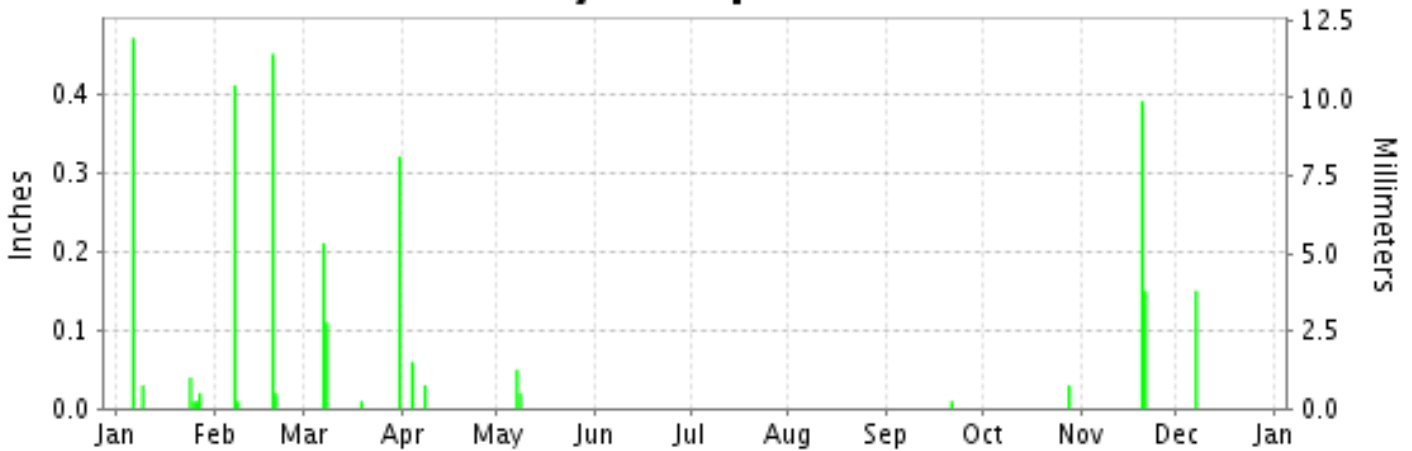
ISSN 0198-0890

## FRESNO, CALIFORNIA (KFAT)

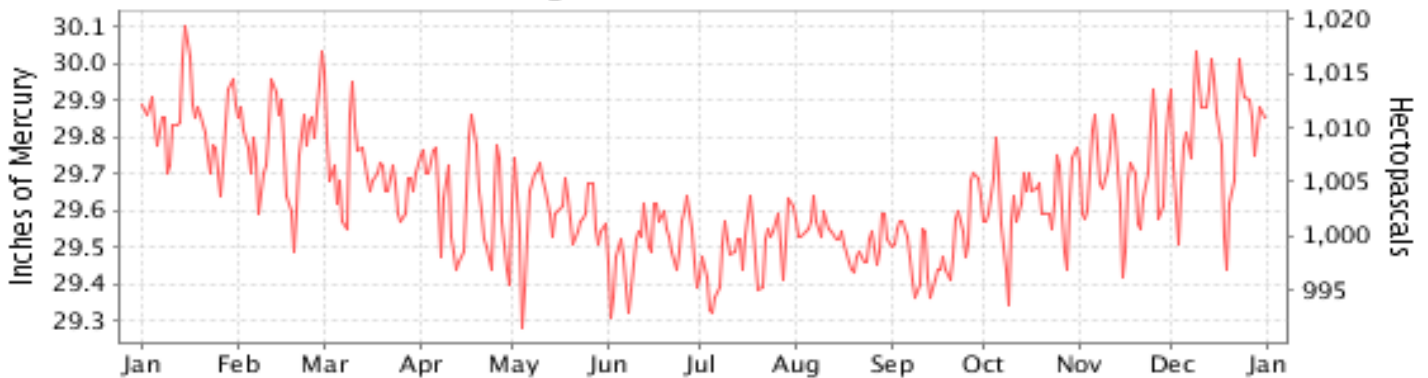
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2013

## FRESNO (KFAT)

LATITUDE: 36° 46'N      LONGITUDE: 119° 43'W      ELEVATION (FT): GRND: 333 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	58.0	62.8	74.5	81.3	86.6	95.6	102.3	98.3	91.5	80.3	70.5	59.9	80.1	
	HIGHEST DAILY MAXIMUM	68	73	85	95	102	109	109	110	103	90	81	69	110	
	DATE OF OCCURRENCE	23	16+	30+	29	12	30	09	19	08	06	10	25+	AUG 19	
	MEAN DAILY MINIMUM	36.2	39.3	49.6	53.8	59.5	66.3	71.9	67.7	64.2	52.9	46.4	34.8	53.6	
	LOWEST DAILY MINIMUM	28	36	40	42	49	56	61	61	51	45	42	27	27	
	DATE OF OCCURRENCE	14	24+	23	17	23	19	17	08	27	30	30	09	DEC 09	
	AVERAGE DRY BULB	47.1	51.0	62.1	67.6	73.0	80.9	87.1	83.0	77.9	66.6	58.5	47.3	66.8	
	MEAN WET BULB	41.6	44.9	52.4	54.4	57.4	63.3	65.8	64.0	61.6	53.1	49.0	40.4	54.0	
	MEAN DEW POINT	36.3	38.7	43.9	42.7	43.8	50.8	52.1	51.2	50.0	41.2	40.3	32.6	43.6	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	5	11	24	31	31	19	1	0	0	122	
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINIMUM <= 32°	9	0	0	0	0	0	0	0	0	0	0	10	19		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	545	386	107	42	4	0	0	0	0	32	189	540	1845	
	COOLING DEGREE DAYS	0	0	23	124	260	483	691	565	394	85	0	0	2625	
RH	MEAN (PERCENT)	71	66	56	45	39	38	34	37	42	45	57	62	49	
	HOUR 04 LST	85	84	75	68	60	59	54	59	63	65	74	79	69	
	HOUR 10 LST	67	59	49	38	32	31	27	30	33	36	47	52	42	
	HOUR 16 LST	53	46	33	25	22	20	17	17	24	26	39	42	30	
	HOUR 22 LST	79	75	63	51	43	43	38	43	47	52	66	70	56	
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	1	0	0	0	0	1	0	0	0	0	2	
PR	MEAN STATION PRESS. (IN.)	29.84	29.79	29.70	29.62	29.59	29.50	29.49	29.53	29.51	29.62	29.70	29.82	29.64	
	MEAN SEA-LEVEL PRESS. (IN.)	30.20	30.14	30.05	29.97	29.94	29.84	29.83	29.87	29.85	29.97	30.04	30.18	29.99	
WINDS	RESULTANT SPEED (MPH)	1.0	0.6	1.9	5.3	6.5	7.7	5.2	6.0	5.3	1.0	0.8	0.3	3.4	
	RES. DIR. (TENS OF DEGS.)	32	32	31	31	30	30	30	31	31	32	31	36	31	
	MEAN SPEED (MPH)	2.7	2.9	4.9	6.9	8.7	8.7	6.7	7.2	6.5	3.4	2.5	2.3	5.3	
	PREVAIL.DIR.(TENS OF DEGS.)	31	31	32	31	31	31	31	31	31	32	30	07	31	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	30	23	25	30	26	26	20	25	31	22	17	21	31	
	DIR. (TENS OF DEGS.)	31	31	30	28	31	31	31	07	29	33	30	08	29	
	DATE OF OCCURRENCE	09	18	19	15	22	18	01	19	21	27	03	07	SEP 21	
	MAXIMUM 3-SECOND WIND:														
SPEED (MPH)	38	29	31	39	32	32	31	41	36	28	22	29	41		
DIR. (TENS OF DEGS.)	30	31	21	29	33	30	29	31	29	34	01	08	31		
DATE OF OCCURRENCE	09	18	31	08	22	18	01	09	21	27	21	07	AUG 09		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.58	0.89	0.65	0.09	0.07	T	T	T	0.01	0.03	0.54	0.15	3.01	
	GREATEST 24-HOUR (IN.)	0.47	0.47	0.32	0.06	0.05	T	T	T	0.01	0.03	0.52	0.15	0.52	
	DATE OF OCCURRENCE	06	19-20	31	04	07	24	22	19	21	28	20-21	07	NOV 20-21	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	6	4	4	2	2	0	0	0	1	1	2	1	23	
PRECIPITATION 0.10	1	2	3	0	0	0	0	0	0	0	2	1	9		
PRECIPITATION 1.00	0	0	0	0	0	0	0	0	0	0	0	0	0		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	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	
	DATE OF OCCURRENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		

# NORMALS, MEANS, AND EXTREMES FRESNO (KFAT)

LATITUDE:  
36° 46'N

LONGITUDE:  
119° 43'W

ELEVATION (FT):  
GRND: 333 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	54.8	61.6	67.6	74.6	84.1	92.0	98.4	97.1	90.9	79.5	65.1	54.9	76.7
	MEAN DAILY MAXIMUM	64	54.7	61.5	67.2	74.4	83.5	91.6	98.3	96.5	90.8	79.7	65.4	54.9	76.5
	HIGHEST DAILY MAXIMUM	64	78	80	90	100	107	110	113	112	111	102	90	77	113
	YEAR OF OCCURRENCE		1986	1991	1972	1981	1984	2008	2006	1996	1955	1980	2010	2006	JUL 2006
	MEAN OF EXTREME MAXS.	64	67.5	73.1	80.3	90.1	98.7	105.0	107.1	105.6	102.2	93.6	79.7	67.1	89.2
	NORMAL DAILY MINIMUM	30	38.3	41.5	45.6	49.4	56.2	62.4	67.6	66.2	61.5	53.0	43.4	38.0	51.9
	MEAN DAILY MINIMUM	64	37.8	40.7	43.9	48.0	54.4	60.6	65.9	64.2	59.8	51.3	42.6	37.4	50.6
	LOWEST DAILY MINIMUM	64	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.	64	28.1	31.6	34.4	38.7	44.6	51.2	57.2	56.6	51.0	41.3	32.6	28.0	41.3
	NORMAL DRY BULB	30	46.6	51.5	56.6	62.0	70.1	77.2	83.0	81.7	76.2	66.2	54.3	46.5	64.3
	MEAN DRY BULB	64	46.2	51.1	55.5	61.2	69.0	76.1	82.1	80.3	75.3	65.5	54.0	46.1	63.5
	MEAN WET BULB	30	42.7	45.5	48.7	50.2	53.6	57.8	61.7	60.9	58.4	53.3	47.3	41.7	51.8
	MEAN DEW POINT	30	41.9	43.9	46.5	46.5	49.2	53.1	57.1	56.5	54.3	49.9	44.9	40.6	48.7
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	1.8	8.7	18.5	28.7	27.1	18.1	3.3	0.0	0.0	106.2
	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	0.0
	MINIMUM <= 32	30	5.6	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	13.2
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	572	377	265	136	30	3	0	0	2	61	325	575	2346
	NORMAL COOLING DEG. DAYS	30	0	0	5	46	190	369	558	516	338	100	2	0	2124
RH	NORMAL (PERCENT)	30	84	77	70	57	48	43	40	44	49	58	74	83	61
	HOURLY 04 LST	30	92	90	87	80	71	65	62	66	71	78	88	92	79
	HOURLY 10 LST	30	85	77	66	51	44	39	38	41	45	52	71	83	58
	HOURLY 16 LST	30	69	57	49	35	28	24	22	25	28	35	53	67	41
	HOURLY 22 LST	30	89	83	76	62	51	44	42	46	51	63	81	88	65
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)	50	10.6	4.7	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.5	4.8	10.1	32.2
	THUNDERSTORMS	64	0.2	0.5	0.8	0.6	0.5	0.4	0.2	0.3	0.6	0.5	0.2	0.3	5.1
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR														
	PARTLY CLOUDY CLOUDY														
PR	MEAN STATION PRESSURE(IN)	30	29.80	29.74	29.70	29.65	29.58	29.53	29.53	29.53	29.54	29.63	29.75	29.77	29.65
	MEAN SEA-LEVEL PRES. (IN)	30	30.16	30.09	30.05	30.00	29.93	29.87	29.86	29.87	29.88	29.98	30.10	30.15	30.00
WINDS	MEAN SPEED (MPH)	30	4.2	5.0	5.9	7.3	8.3	8.4	7.4	6.8	6.0	4.7	4.0	4.1	6.0
	PREVAIL.DIR.(TENS OF DEGS)	38	14	32	32	32	32	31	31	31	31	31	31	12	31
	MAXIMUM 2-MINUTE: SPEED (MPH)	18	38	36	32	36	32	33	24	25	31	35	30	35	38
	DIR. (TENS OF DEGS)		16	13	31	29	32	30	30	07	29	28	28	28	16
	YEAR OF OCCURRENCE		2005	1998	2007	1999	1998	2012	2006	2013	2013	2007	2001	2008	JAN 2005
	MAXIMUM 3-SECOND SPEED (MPH)	18	46	43	41	41	39	40	33	41	36	45	37	45	46
	DIR. (TENS OF DEGS)		16	29	18	32	32	31	07	31	29	33	29	01	16
YEAR OF OCCURRENCE		2005	1999	2006	2002	2008	2012	2007	2013	2013	2009	2001	2011	JAN 2005	
PRECIPITATION	NORMAL (IN)	30	2.19	2.03	2.03	0.95	0.43	0.21	0.01	0.01	0.17	0.63	1.07	1.77	11.50
	MAXIMUM MONTHLY (IN)	64	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)	64	0.04	T	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	YEAR OF OCCURRENCE		1976	1964	1972	2008	1982	1983	1983	1981	1981	1978	1959	1989	DEC 1989
	MAXIMUM IN 24 HOURS (IN)	64	2.74	1.99	2.43	1.39	1.42	1.80	0.22	0.25	0.97	1.76	1.35	1.82	2.74
	YEAR OF OCCURRENCE		2006	1969	1995	1983	1990	1998	1992	1964	1978	1992	1953	2007	JAN 2006
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	7.6	8.6	7.5	4.5	2.2	0.7	0.2	0.3	1.0	2.5	5.5	7.5	48.1
PRECIPITATION >= 1.00	30	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	1.3	
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	0.0	0.0
	MAXIMUM MONTHLY (IN)	54	2.2	T	T	T	0.0	T	T	T	T	T	0.0	1.2	2.2
	YEAR OF OCCURRENCE		1962	1994	2011	2010		2013	2013	2013	2011	1974		1968	JAN 1962
	MAXIMUM IN 24 HOURS (IN)	54	1.5	T	T	T	0.0	T	0.0	0.0	0.0	T	0.0	1.2	1.5
	YEAR OF OCCURRENCE		1962	1994	2011	2010		1995				1974		1968	JAN 1962
	MAXIMUM SNOW DEPTH (IN)	53	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) 2013 FRESNO (KFAT)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2003	0.40	1.22	0.63	2.84	0.68	0.00	T	0.04	T	T	0.40	2.93	9.14
2004	0.88	1.69	1.54	0.03	0.07	0.00	0.00	0.00	0.00	2.45	0.81	3.16	10.63
2005	2.42	2.30	2.51	0.56	1.62	0.01	0.00	T	0.04	0.05	0.17	2.00	11.68
2006	3.40	0.54	4.73	3.27	0.36	0.00	T	0.00	0.00	0.08	0.23	1.33	13.94
2007	0.59	2.29	0.97	0.49	0.05	0.00	T	0.02	0.02	0.20	0.09	2.31	7.03
2008	3.32	2.12	0.02	T	0.30	0.00	0.01	0.00	0.00	0.23	1.37	1.09	8.46
2009	1.02	2.43	0.24	0.72	0.46	0.20	0.00	T	0.01	1.39	0.20	2.41	9.08
2010	2.05	2.94	0.96	2.19	0.21	0.00	T	0.00	0.00	0.44	1.80	5.92	16.51
2011	1.71	1.60	3.46	0.32	0.35	1.91	T	0.00	T	0.90	0.67	0.00	10.92
2012	1.38	0.75	2.43	2.02	0.00	T	T	T	0.00	0.25	1.11	2.03	9.97
2013	0.58	0.89	0.65	0.09	0.07	T	T	T	0.01	0.03	0.54	0.15	3.01
POR= 64 YRS	2.09	1.90	1.84	1.03	0.35	0.16	0.01	0.01	0.15	0.52	1.13	1.63	10.82

WBAN : 93193

**AVERAGE TEMPERATURE (°F) 2013 FRESNO (KFAT)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2003	50.6	51.1	58.1	58.6	69.5	78.4	86.5	81.4	79.2	69.8	52.2	49.3	65.4
2004	46.6	50.5	62.6	65.8	70.9	77.4	83.3	81.3	75.9	64.1	51.7	46.5	64.7
2005	47.4	54.4	57.8	59.6	69.4	73.6	86.8	84.0	73.9	65.9	57.6	51.0	65.1
2006	48.7	52.4	50.1	59.7	71.9	80.7	87.9	80.2	75.8	64.0	55.4	47.1	64.5
2007	43.7	51.4	60.3	63.0	71.5	78.0	83.2	82.8	73.7	64.4	57.4	45.5	64.6
2008	47.0	51.1	57.0	61.7	70.3	79.1	83.8	84.1	78.0	67.1	57.5	44.9	65.1
2009	47.7	51.5	56.0	62.0	75.3	75.7	85.0	81.8	79.7	63.7	54.1	47.2	65.0
2010	48.6	52.2	55.5	57.7	65.2	77.6	83.1	79.9	76.9	68.0	53.8	50.9	64.1
2011	46.6	49.2	55.4	60.7	65.1	75.0	82.0	82.4	80.3	68.0	53.5	45.6	63.7
2012	49.3	52.7	56.2	63.0	72.4	77.9	83.4	86.6	81.4	69.1	58.3	50.9	66.8
2013	47.1	51.0	62.1	67.6	73.0	80.9	87.1	83.0	77.9	66.6	58.5	47.3	66.8
POR= 64 YRS	46.2	51.1	55.6	61.2	69.0	76.1	82.1	80.3	75.3	65.5	54.0	46.1	63.6

**HEATING DEGREE DAYS (base 65°F) 2013 FRESNO (KFAT)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
2002-03	0	0	0	67	256	477	440	382	216	191	49	0	2078
2003-04	0	0	0	24	378	482	565	413	113	64	3	0	2042
2004-05	0	0	6	124	391	566	537	291	217	158	30	1	2321
2005-06	0	0	0	41	217	424	500	345	456	170	9	0	2162
2006-07	0	0	2	56	283	546	654	373	158	117	19	1	2209
2007-08	0	0	6	59	223	600	552	396	243	149	20	0	2248
2008-09	0	0	0	39	219	616	531	369	274	145	0	0	2193
2009-10	0	0	2	87	322	544	500	352	289	227	62	0	2385
2010-11	0	0	0	40	346	432	563	438	292	138	67	7	2323
2011-12	0	0	0	29	338	595	478	352	268	129	6	2	2197
2012-13	0	0	0	38	205	432	545	386	107	42	4	0	1759
2013-	0	0	0	32	189	540							

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**COOLING DEGREE DAYS (base 65°F) 2013 FRESNO (KFAT)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
2003	0	0	7	5	192	406	671	518	431	180	0	0	2410
2004	0	0	45	97	188	376	576	514	341	99	0	0	2236
2005	0	0	4	2	170	266	682	597	271	79	2	0	2073
2006	0	0	0	20	231	478	715	475	337	31	1	0	2288
2007	0	0	20	64	229	396	569	560	274	50	0	0	2162
2008	0	0	0	54	192	431	592	599	394	114	1	0	2377
2009	0	0	1	62	330	328	628	527	451	53	3	0	2383
2010	0	0	0	15	72	386	563	470	364	144	17	0	2031
2011	0	0	1	18	81	315	535	546	466	128	0	0	2090
2012	0	0	2	77	242	391	577	677	495	172	11	0	2644
2013	0	0	23	124	260	483	691	565	394	85	0	0	2625

**SNOWFALL (inches) 2013 FRESNO (KFAT)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	T	0.0	0.0	0.0	0.0	T
1996-97	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1997-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	T
1998-99	0.0	0.0	0.0	0.0	0.0	0.5	T	T	0.0	0.0	0.0	0.0	0.5
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
2000-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	T
2001-02	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
2002-03	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
2003-04	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
2004-05	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
2005-	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2006-07	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
2007-08	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
2008-09	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2009-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	T
2010-11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
2011-12	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
2012-13	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
2013-	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
POR= 64 YRS	0.0	0.0	0.0	T	0.0	T	T	T	T	T	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. 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 CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.</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</p>	<p>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 STATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS: <a href="http://www.ncdc.noaa.gov/homr/">http://www.ncdc.noaa.gov/homr/</a> SNOWFALL STOPPED MONTH &amp; YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p><b>NOTE:</b> The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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# 2013 FRESNO CALIFORNIA (KFAT)

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 History

FRESNO, CA

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
FRESNO AIR TERMINAL	1947-10-01	1949-08-01	36° 46'	-119° 42'			AIRWAYS
FRESNO AIR TERMINAL	1949-08-20	1949-08-31	36° 46'	-119° 42'	338	7 MI ENE	AIRWAYS, COOP, USHCN
FRESNO AIR TERMINAL	1993-11-10	1995-09-01	36° 46'	-119° 43'	336		COOP, USHCN, WXSVC
FRESNO YOSEMITE INTL AP	1995-09-01	1995-11-15	36° 46'	-119° 43'	333	.5 MI WSW	ASOS, COOP, USHCN
FRESNO YOSEMITE INTL AP	2010-06-24	Present	36° 46'	-119° 43'	333		ASOS, COOP, USHCN
FRESNO AIR TERMINAL	1949-08-01	1949-08-20	36° 46'	-119° 42'	338		AIRWAYS
FRESNO AIR TERMINAL	1961-01-01	1978-01-01	36° 46'	-119° 43'	328		AIRWAYS, COOP, USHCN
FRESNO AIR TERMINAL	1978-01-01	1985-02-01	36° 46'	-119° 43'	328		COOP, USHCN, WXSVC
FRESNO YOSEMITE INTL AP	1995-11-15	2010-06-24	36° 46'	-119° 43'	333		ASOS, COOP, USHCN
FRESNO AIR TERMINAL	1949-08-31	1961-01-01	36° 46'	-119° 42'	338		AIRWAYS, COOP, USHCN
FRESNO AIR TERMINAL	1985-02-01	1993-11-10	36° 46'	-119° 43'	336	1 MI NNE	COOP, USHCN, WXSVC

# Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	1947-10-01	1969-04-01	DAILY	2400			
MAX/MINTEM	1982-01-01	1985-02-01	DAILY	0800	PALMER		
TEMP	1995-09-01	2000-08-23	DAILY	2400	HYGR		
TEMP	2010-06-24	Present	DAILY	2400	ATEMP		
PRECIP	1982-01-01	1985-02-01	HOURLY	2400			
PRECIP	1995-09-01	2000-08-23	HOURLY	2400	TB	RCRD	
TEMP	2001-06-04	2010-06-24	DAILY	2400	ATEMP		
PRECIP	1947-10-01	1969-04-01	DAILY	2400	UNIV	RCRD	
PRECIP	1995-07-01	1995-09-01	HOURLY	2400	UNIV	RCRD	
TEMP	2000-08-23	2000-08-24	DAILY	2400			
PRECIP	1969-04-01	1982-01-01	DAILY	2400	UNIV	RCRD	
TEMP	1985-02-01	1995-07-01	DAILY	2400	MXMN		
PRECIP	1995-09-01	2000-08-23	DAILY	2400	TB	RCRD	
PRECIP	2010-06-24	Present	DAILY	2400	PCPNX		
MAX/MINTEM	1982-01-01	1985-02-01	DAILY	0800	PALMER		
PRECIP	1982-01-01	1985-02-01	DAILY	2400	UNIV	RCRD	
PRECIP	1995-07-01	1995-09-01	DAILY	2400	UNIV	RCRD	
TEMP	1995-07-01	1995-09-01	DAILY	2400	MXMN		
PRECIP	2000-08-23	2001-06-04	HOURLY	2400	TB	RCRD	
PRECIP	2010-06-24	Present	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	2000-08-23	2001-06-04	DAILY	2400	TB	RCRD	
TEMP	2010-06-24	Present	DAILY	1700	ATEMP		
TEMP	1969-04-01	1982-01-01	DAILY	2400			
MAX/MINTEM	1969-04-01	1982-01-01	DAILY	0800	PALMER		
TEMP	1982-01-01	1985-02-01	DAILY	2400			
PRECIP	1985-02-01	1995-07-01	HOURLY	2400			
TEMP	2000-08-24	2001-06-04	DAILY	2400	HYGR		
PRECIP	2001-06-04	2010-06-24	DAILY	2400	AHTB	RCRD;HTD	
PRECIP	2001-06-04	2010-06-24	HOURLY	2400	AHTB	RCRD;HTD	
MAX/MINTEM	1969-04-01	1982-01-01	DAILY	0800	PALMER		
PRECIP	1985-02-01	1995-07-01	DAILY	2400	UNIV	RCRD	
PRECIP	2010-06-24	Present	HOURLY	VAR	AWPAG	RCRD;HTD	

\* 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

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TDD : (828) 271-4010

Email : [ncdc.orders@noaa.gov](mailto:ncdc.orders@noaa.gov)

NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

Visit our Web Site for other weather data: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)