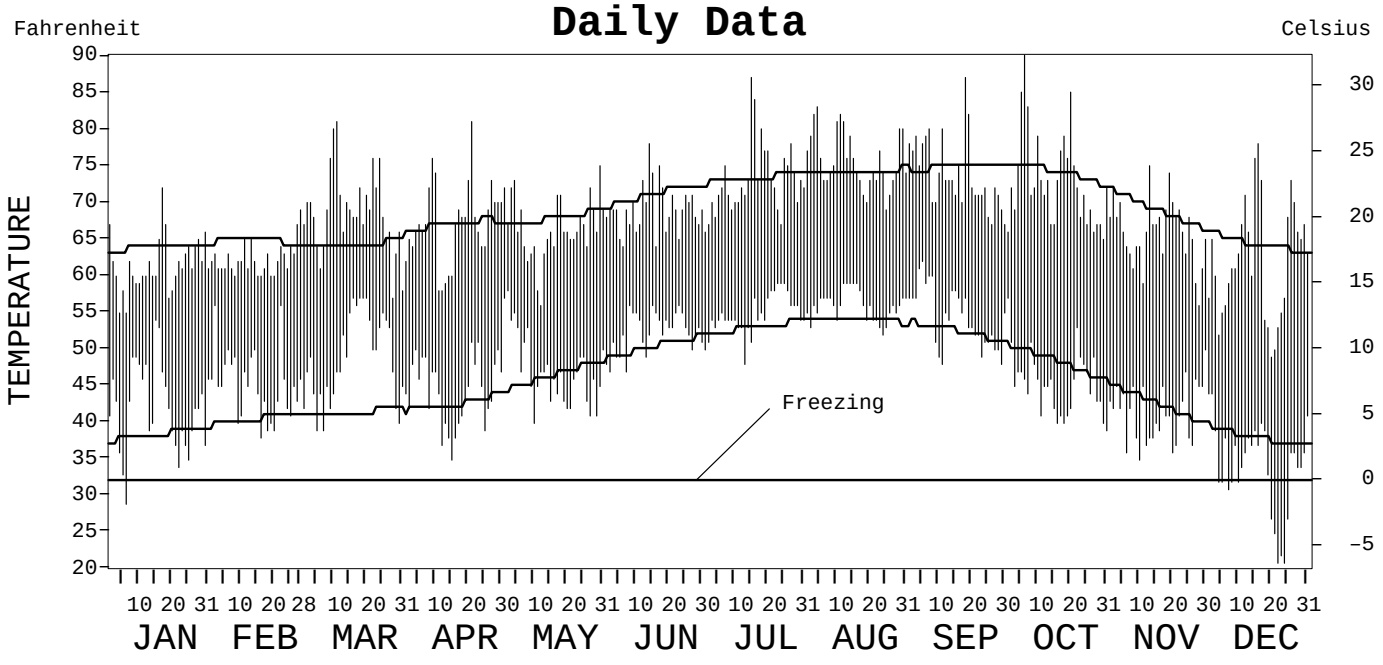
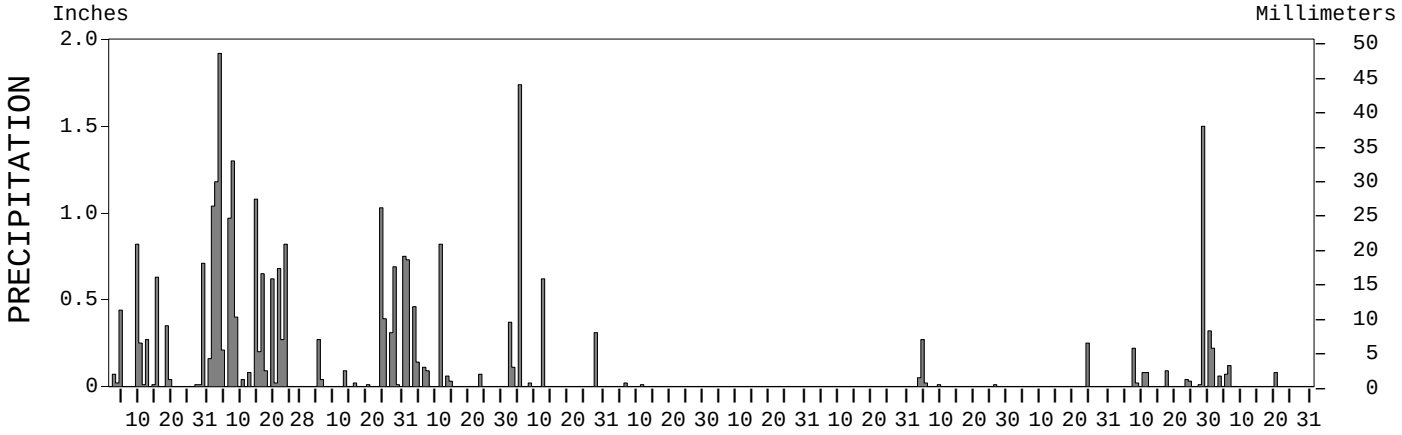
1998 LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

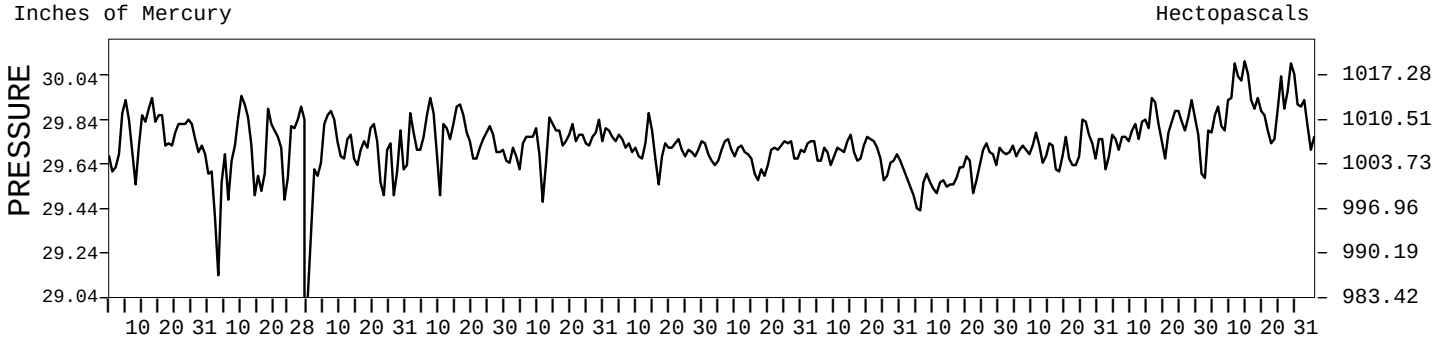
ISSN 0198-084X

SANTA MARIA,
CALIFORNIA (SMX)

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

METEOROLOGICAL DATA FOR 1998

SANTA MARIA, CA (SMX)

LATITUDE: 34° 54′ 58″ N LONGITUDE: 120° 27′ 55″ W ELEVATION (FT): GRND: 236 BARO: 270 TIME ZONE: PACIFIC (UTC+ 8) WBAN: 23273

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	61.5	62.4	68.6	67.1	66.6	69.1	73.0	75.7	73.8	73.0	65.9	62.0	68.2
	HIGHEST DAILY MAXIMUM	72	69	81	81	75	78	87	83	87	90	75	78	90
	DATE OF OCCURRENCE	17	28	11	21	30	14	15	04	18	06	13	16	OCT 06
	MEAN DAILY MINIMUM	42.0	45.1	48.8	44.3	47.2	52.3	54.7	55.9	54.4	45.4	41.4	34.0	47.1
	LOWEST DAILY MINIMUM	29	38	39	35	40	47	48	52	48	39	35	21	21
	DATE OF OCCURRENCE	06	16	07+	15	10	07+	13	24	29+	31	10	24+	DEC 24+
	AVERAGE DRY BULB	51.8	53.8	58.7	55.7	56.9	60.7	63.9	65.8	64.1	59.2	53.7	48.0	57.7
	MEAN WET BULB	48.6	51.4			52.5	55.7		59.9	59.0	51.8	49.4	42.7	
	MEAN DEW POINT	45.3	49.0			49.2	53.0		57.7	56.5	46.6	46.2	37.4	
	NUMBER OF DAYS WITH:													
	MAXIMUM ≥ 90°	0	0	0	0	0	0	0	0	0	1	0	0	1
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	1	0	0	0	0	0	0	0	0	0	0	11	12
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	403	309	187	271	241	124	52	14	56	176	333	517	2683
	COOLING DEGREE DAYS	0	0	0	1	0	0	24	47	37	4	0	0	113
RH	MEAN (PERCENT)	82	84	75	78	79	81	82	83	83	73	81	73	80
	HOUR 04 LST	91	91	83	91	92	93	95	96	94	87	93	85	91
	HOUR 10 LST	76	76	65	64	64	72	72	69	71	50	63	61	67
	HOUR 16 LST	71	74	66	64	67	67	68	67	69	63	72	62	68
	HOUR 22 LST	89	88	81	87	91	91	93	94	92	84	91	80	88
S	PERCENT POSSIBLE SUNSHINE													
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY ≤ 1/4 MI)	8	0	4	6	5	3	7	13	7	9	9	5	76
	THUNDERSTORMS	0	1	0	0	0	0	0	0	0	0	0	0	1
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.)	29.79	29.70		29.78	29.76	29.74	29.70	29.69	29.61	29.72	29.81	29.93	
	MEAN SEA-LEVEL PRESS. (IN.)	30.05	29.96			30.02	30.00		29.95	29.87	29.98	30.08	30.20	
WINDS	RESULTANT SPEED (MPH)	0.7	2.1		3.8	5.0	6.5	5.8	4.4	4.2	4.7	3.2	3.0	
	RES. DIR. (TENS OF DEGS.)	25	21		28	28	30	30	30	30	30	31	33	
	MEAN SPEED (MPH)	5.6	8.5	6.8	6.7	8.3	7.4	6.6	5.4	5.4	6.6	6.6	6.0	6.7
	PREVAIL.DIR.(TENS OF DEGS.)	30	15	30	29	29	30	30	30	30	30	30	30	30
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)	24	46	28	28	28	26	29	22	29	30	30	32	46
	DIR. (TENS OF DEGS.)	16	13	29	29	29	29	29	30	30	29	29	31	13
	DATE OF OCCURRENCE	18+	06	03	24+	09	30	01	18	19	29+	05	20+	FEB 06
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	31	57	33	32	32	30	34	24	33	37	33	39	57
	DIR. (TENS OF DEGS.)	13	15	30	29	30	29	29	32	30	29	30	26	15
	DATE OF OCCURRENCE	31+	06	26+	24	21+	30	01	23+	19	09	05	06	FEB 06
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	3.80	11.57	3.61	2.51	3.17	0.03	T	T	0.36	0.25	2.39	0.55	28.24
	GREATEST 24-HOUR (IN.)	0.90	2.21	1.42	0.82	1.74	0.02	T	T	0.29	0.25	1.50	0.22	2.21
	DATE OF OCCURRENCE	09-10	01-02	24-25	11	05	06	05	12+	04-05	24	28	01	FEB 01-02
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	15	18	11	9	6	2	0	0	5	1	10	5	82
	PRECIPITATION ≥ 0.10	8	14	6	5	5	0	0	0	1	1	3	2	45
	PRECIPITATION ≥ 1.00	0	5	1	0	1	0	0	0	0	0	1	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

SANTA MARIA, CA (SMX)

LATITUDE: 34° 54′ 58″ N LONGITUDE: 120° 27′ 55″ W ELEVATION (FT): GRND: 236 BARO: 270 TIME ZONE: PACIFIC (UTC+ 8) WBAN: 23273

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	63.8	64.7	64.2	66.9	67.8	71.0	73.3	74.1	74.8	73.9	68.7	64.2	69.0
	MEAN DAILY MAXIMUM	44	63.5	64.5	64.7	67.1	68.0	69.0	71.1	73.7	74.5	73.9	69.1	64.5	68.6
	HIGHEST DAILY MAXIMUM	56	86	89	95	103	100	102	104	103	103	108	93	90	108
	YEAR OF OCCURRENCE		1976	1995	1988	1989	1970	1976	1985	1962	1978	1987	1997	1958	OCT 1987
	MEAN OF EXTREME MAXS.	44	76.0	77.0	78.1	83.1	82.9	82.2	82.8	85.4	91.2	91.3	84.1	77.6	82.6
	NORMAL DAILY MINIMUM	30	38.3	40.4	41.3	42.5	46.4	50.3	52.9	53.9	52.3	48.0	42.3	37.8	45.5
	MEAN DAILY MINIMUM	44	38.9	41.0	42.1	43.3	46.8	49.2	52.0	53.9	52.4	48.1	42.3	38.3	45.7
	LOWEST DAILY MINIMUM	56	20	22	24	31	31	36	43	43	36	26	25	20	20
	YEAR OF OCCURRENCE		1976	1971	1971	1984	1964	1962	1964	1973	1948	1971	1958	1978	DEC 1978
	MEAN OF EXTREME MINS.	44	28.0	30.7	32.6	34.4	37.9	41.5	46.0	48.0	45.0	38.8	32.5	27.7	36.9
	NORMAL DRY BULB	30	51.1	52.6	52.8	54.8	57.1	60.7	63.1	64.0	63.6	61.0	55.5	51.1	57.3
	MEAN DRY BULB	44	51.2	52.7	53.4	55.1	57.4	59.1	61.6	63.8	63.5	61.0	55.7	51.4	57.2
	MEAN WET BULB	15	48.5	50.2	51.7	53.0	54.4	52.7	54.7	59.4	58.7	55.8	51.1	43.8	52.8
	MEAN DEW POINT	15	39.3	40.5	43.1	43.6	45.4	48.2	50.5	55.5	54.6	50.0	43.8	36.8	45.9
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.1	0.4	0.4	0.7	0.4	0.3	1.5	1.5	0.1	0.0	5.4
	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	6.6	3.2	1.7	0.5	0.1	0.0	0.0	0.0	0.0	0.2	1.6	6.2	20.1
	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	431	347	378	311	248	138	96	72	100	143	289	431	2984
	NORMAL COOLING DEG. DAYS	30	0	0	0	5	0	9	37	41	58	19	0	0	169
RH	NORMAL (PERCENT)	30	65	73	76	76	79	79	81	80	80	75	71	71	76
	HOUR 04 LST	30	77	83	88	89	92	91	95	93	92	86	81	84	88
	HOUR 10 LST	30	62	63	63	58	60	62	63	65	63	57	56	58	61
	HOUR 16 LST	30	58	61	63	60	60	60	60	62	62	61	61	58	60
	HOUR 22 LST	30	78	82	84	86	88	89	91	90	90	83	82	79	85
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	26	4.6	4.1	4.8	5.8	6.2	6.1	7.2	9.7	11.8	11.3	6.4	5.7	83.7
	THUNDERSTORMS	26	0.2	0.1	0.3	0.2	0.2	0.0	0.2	0.3	0.4	0.1	0.1	0.1	2.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	45	4.0	4.1	3.9	3.7	3.4	3.0	2.7	2.7	2.8	2.9	3.2	3.7	3.3
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	45	12.7	11.6	12.5	13.0	14.3	15.5	17.3	16.8	16.1	16.7	15.2	13.8	175.5
	PARTLY CLOUDY	45	7.4	6.4	8.5	8.8	9.9	10.6	12.0	12.5	10.3	8.8	7.2	7.3	109.7
	CLOUDY	45	11.0	10.2	10.0	8.3	6.9	3.9	1.6	1.7	3.6	5.4	7.6	9.9	80.1
PR	MEAN STATION PRESSURE(IN)	2	29.81	29.70	29.81	29.76	29.73	29.69	29.70	29.69	29.64	29.72	29.78	29.86	29.74
	MEAN SEA-LEVEL PRES. (IN)	15	30.11	30.06	30.05	30.02	29.99	29.96	29.97	29.96	29.94	29.99	30.07	30.11	30.02
WINDS	MEAN SPEED (MPH)	12	5.9	6.8	8.0	8.4	8.9	8.0	6.8	6.3	5.9	6.2	6.0	5.6	6.9
	PREVAIL.DIR(TENS OF DEGS)	3	30	30	30	30	30	30	30	30	30	30	30	30	30
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	2	33	46	32	37	33	36	32	30	32	33	31	33	46
	DIR. (TENS OF DEGS)		04	13	30	29	30	29	29	29	29	30	26	13	13
	YEAR OF OCCURRENCE		1997	1998	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	FEB 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	2	37	57	37	43	39	43	37	38	36	38	40	41	57
	DIR. (TENS OF DEGS)		03	15	02	29	30	30	30	16	29	30	20	13	15
	YEAR OF OCCURRENCE		1997	1998	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	FEB 1998
PRECIPITATION	NORMAL (IN)	30	2.16	2.62	2.27	0.99	0.20	0.03	0.01	0.05	0.30	0.49	1.46	1.78	12.36
	MAXIMUM MONTHLY (IN)	56	11.78	11.57	9.41	4.24	3.17	0.86	0.62	0.86	3.05	2.07	4.74	4.82	11.78
	YEAR OF OCCURRENCE		1995	1998	1991	1958	1998	1995	1950	1976	1976	1960	1965	1955	JAN 1995
	MINIMUM MONTHLY (IN)	56	T	T	T	0.00	0.00	T	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	YEAR OF OCCURRENCE		1976	1953	1959	1997	1978	1994	1982	1971	1992	1988	1959	1989	APR 1997
	MAXIMUM IN 24 HOURS (IN)	56	2.55	2.61	3.32	1.60	1.74	0.79	0.62	0.85	1.78	2.07	1.93	3.15	3.32
	YEAR OF OCCURRENCE		1943	1978	1995	1960	1998	1995	1950	1976	1976	1960	1965	1974	MAR 1995
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	7.0	7.2	7.7	4.5	1.7	0.8	0.3	0.5	1.5	2.4	5.7	6.0	45.3
	PRECIPITATION ≥ 1.00	30	0.4	0.7	0.4	0.2	*	0.0	0.0	0.0	0.1	0.1	0.1	0.3	2.3
SNOWFALL	NORMAL (IN)	30	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0
	MAXIMUM MONTHLY (IN)	54	T	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T
	YEAR OF OCCURRENCE		1962	1996	1995								1975	1990	FEB 1996
	MAXIMUM IN 24 HOURS (IN)	54	T	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T
	YEAR OF OCCURRENCE		1962	1996	1995								1975	1990	FEB 1996
	MAXIMUM SNOW DEPTH (IN)	41	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) 1998 SANTA MARIA, CA (SMX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	7.09	7.57	0.66	1.74	0.01	0.01	T	T	0.13	0.14	0.94	0.29	18.58
1970	2.15	2.67	1.98	0.03	T	0.06	T	T	T	0.01	2.88	3.47	13.25
1971	0.61	0.10	0.35	1.01	0.98	T	T	0.00	0.04	0.24	0.49	2.80	6.62
1972	0.16	0.31	0.01	0.19	T	0.01	0.05	T	T	0.60	4.28	1.14	6.75
1973	4.81	6.20	3.02	T	0.03	0.01	T	0.01	0.09	0.38	2.15	3.04	19.74
1974	4.16	0.14	5.08	0.81	T	T	T	T	T	1.00	0.10	4.64	15.93
1975	0.10	3.22	3.02	0.81	T	T	T	T	T	0.79	0.34	0.17	8.45
1976	T	4.40	0.71	1.19	0.03	0.05	T	0.86	3.05	0.25	0.23	1.09	11.86
1977	1.39	0.06	1.55	0.04	2.44	T	T	0.01	0.02	T	0.15	4.22	9.88
1978	5.62	8.56	4.97	2.46	0.00	0.04	T	T	1.61	T	1.45	1.04	25.75
1979	3.69	3.44	3.49	0.04	0.09	T	T	T	0.40	0.48	0.40	1.25	13.28
1980	3.76	5.53	1.79	0.71	0.32	T	0.08	T	T	0.01	0.01	1.26	13.47
1981	3.54	2.71	5.59	0.44	T	T	T	T	T	0.82	1.23	0.78	15.11
1982	2.70	1.13	4.86	2.01	T	0.11	0.00	0.20	0.38	1.26	3.31	1.05	17.01
1983	6.71	5.76	5.26	2.29	0.09	T	T	0.28	0.77	0.43	2.44	2.73	26.76
1984	0.08	0.49	0.60	0.49	T	T	T	T	0.02	0.53	2.03	3.23	7.47
1985	0.74	0.87	1.82	0.07	T	T	T	0.03	0.02	0.38	3.11	0.76	7.80
1986	0.95	3.68	4.99	1.35	T	T	T	T	0.67	T	0.89	1.41	13.94
1987	1.22	1.01	3.47	0.40	T	0.05	0.01	T	T	2.00	0.57	3.09	11.82
1988	1.42	2.39	0.08	2.54	0.23	0.04	T	T	0.01	0.00	0.78	3.74	11.23
1989	0.41	0.94	0.61	0.08	0.06	T	T	0.00	0.64	0.16	0.38	0.02	3.30
1990	2.28	1.65	0.19	0.22	0.47	T	T	0.01	0.36	0.01	0.17	0.69	6.05
1991	0.96	2.29	9.41	0.28	0.00	0.04	0.00	0.04	T	0.31	0.15	3.12	16.60
1992	2.15	5.73	2.25	T	T	T	0.40	T	0.00	0.45	0.01	2.80	13.79
1993	5.46	3.91	3.54	0.04	0.21	0.12	T	T	0.01	0.40	0.76	1.77	16.22
1994	1.95	3.49	2.15	1.03	0.56	T	0.00	T	0.09	0.44	1.72	1.12	12.55
1995	11.78	1.92	7.72	0.39	0.46	0.86	T	T	T	0.01	0.32	1.44	24.90
1996	2.04	7.17	1.17	0.59	0.32			0.00	T	1.51	1.54	3.36	
1997	3.51	0.08	0.01	0.00	0.00	T	0.04	0.04	0.71	0.07	4.37	2.65	11.48
1998	3.80	11.57	3.61	2.51	3.17	0.03	T	T	0.36	0.25	2.39	0.55	28.24
POR= 56 YRS	2.44	2.69	1.17	1.33	2.56	1.22	0.84	0.41	1.43	0.63	1.87	0.83	17.42

WBAN : 23273

AVERAGE TEMPERATURE (°F) 1998 SANTA MARIA, CA (SMX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	53.2	51.0	51.3	53.8	58.2	60.7	62.9	62.4	62.7	60.3	58.5	52.2	57.3
1970	53.9	54.8	54.3	53.0	59.4	59.2	62.2	60.3	61.3	57.8	55.5	49.1	56.7
1971	49.9	49.6	51.0	50.6	54.2	58.6	61.5	65.1	63.3	55.7	50.8	45.6	54.7
1972	48.3	53.0	55.7	55.5	56.7	61.1	63.7	63.9	62.4	60.4	52.7	48.0	56.8
1973	47.3	53.0	48.9	54.1	59.5	64.1	61.8	62.0	62.3	61.0	52.3	51.2	56.5
1974	49.7	50.5	52.8	54.0	54.8	60.2	63.5	63.9	62.4	59.8	55.2	49.9	56.4
1975	50.2	50.4	50.3	49.8	55.8	60.2	61.5	62.9	62.3	58.1	53.7	50.8	55.5
1976	52.5	52.5	52.4	51.7	57.2	62.7	63.8	64.7	65.3	62.3	58.8	51.8	58.0
1977	51.0	54.7	49.2	54.9	55.2	60.6	63.0	65.2	63.8	60.3	59.9	57.1	57.9
1978	54.4	53.9	57.7	53.9	59.4	59.4	61.1	64.1	64.9	60.4	52.2	47.3	57.4
1979	48.6	49.0	52.8	53.9	59.0	60.9	63.2	63.9	65.6	62.0	54.8	54.1	57.3
1980	54.9	55.9	52.5	56.5	55.6	59.0	63.2	63.4	62.6	60.3	55.3	55.4	57.9
1981	54.3	54.4	53.1	55.5	57.1	64.6	63.8	63.5	63.0	58.4	57.4	52.9	58.2
1982	48.3	54.6	52.0	55.1	57.6	59.8	62.3	63.3	64.9	62.1	54.1	51.5	57.1
1983	53.5	54.1	55.0	55.0	58.9	62.6	66.1	68.8	70.0	66.2	56.3	54.1	60.1
1984	53.2	51.8	55.5	54.4	61.3	61.3	67.4	68.4	71.9	60.4	54.5	50.6	59.2
1985	50.0	52.7	51.8	58.7	58.4	64.1	68.7	64.1	63.8	60.8	53.4	53.5	58.3
1986	56.6	55.4	56.0	55.8	57.2	60.6	63.6	63.9	60.8	60.8	57.5	51.3	58.3
1987	48.0	52.3	52.4	57.4	59.7	60.5	60.9	62.6	62.4	64.1	55.2	48.7	57.0
1988	50.9	55.5	56.6	56.9	57.0	60.2	65.2	64.7	61.6	61.1	55.3	50.5	58.0
1989	49.2	49.3	55.4	59.9	57.5	61.3	62.4	62.6	61.6	62.1	59.2	54.5	57.9
1990	51.3	49.9	53.6	58.8	57.6	60.7	64.4	65.7	63.9	62.1	56.5	48.9	57.8
1991	52.4	55.6	50.3	54.6	54.0	58.2	63.7	63.5	63.4	60.9	57.3	52.6	57.2
1992	52.5	57.4	56.1	60.2	61.3	61.5	64.8	64.7	64.1	63.0	57.4	50.4	59.5
1993	52.6	53.1	57.5	57.9	60.7	62.9	63.9	65.0	63.0	62.4	57.3	51.8	59.0
1994	53.0	51.9	56.4	55.8	57.9	60.1	61.6	63.5	62.7	60.3	50.1	50.2	57.0
1995	53.7	57.2	55.4	54.9	57.0	59.6	64.1	63.0	62.6	62.7	59.3	53.5	58.6
1996	52.5	56.0	54.9	60.3	60.2			62.8	61.6	59.6	56.2	53.2	
1997	52.2	51.3	55.4	55.7	62.6	61.7	63.7	66.9	68.4	62.3	58.1	50.0	59.0
1998	51.8	53.8	58.7	55.7	56.9	60.7	63.9	65.8	64.1	59.2	53.7	48.0	57.7
POR= 56 YRS	50.9	52.5	53.2	55.2	57.4	60.2	61.6	63.3	63.3	60.7	55.7	51.5	57.1

HEATING DEGREE DAYS (base 65°F) 1998 SANTA MARIA, CA (SMX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	66	78	71	147	190	385	335	279	322	356	188	167	2584
1970-71	99	141	144	218	279	486	471	425	427	426	330	188	3634
1971-72	110	22	76	301	421	596	510	340	284	280	252	116	3308
1972-73	53	56	91	146	363	521	542	326	496	320	180	82	3176
1973-74	95	86	95	126	379	421	468	398	373	322	312	138	3213
1974-75	60	41	78	164	287	462	450	402	446	451	276	136	3253
1975-76	103	63	96	215	334	432	381	354	385	394	242	132	3131
1976-77	44	30	23	97	184	402	427	282	487	297	298	125	2696
1977-78	81	27	44	145	161	238	323	305	216	325	181	160	2206
1978-79	112	45	54	139	379	544	505	442	372	326	189	130	3237
1979-80	69	35	27	97	299	330	307	254	378	252	286	183	2517
1980-81	68	60	85	155	288	290	327	297	360	289	238	57	2514
1981-82	47	52	58	202	221	367	509	288	398	289	224	153	2808
1982-83	76	53	38	104	319	409	349	301	305	291	184	66	2495
1983-84	21	1	0	34	258	330	356	377	286	318	135	106	2222
1984-85	1	6	1	144	310	436	461	339	402	188	195	45	2528
1985-86	5	45	61	150	343	348	254	262	271	270	235	127	2371
1986-87	48	39	125	132	218	420	516	352	385	223	159	132	2749
1987-88	117	71	80	79	287	499	430	272	267	237	244	139	2722
1988-89	44	33	108	132	294	441	483	433	291	196	227	111	2793
1989-90	82	69	98	112	172	319	418	415	347	181	221	128	2562
1990-91	40	11	37	93	253	491	383	259	446	306	334	203	2856
1991-92	39	62	49	131	234	373	380	217	271	144	110	98	2108
1992-93	47	24	34	77	226	445	377	330	227	204	137	86	2214
1993-94	47	23	79	81	224	403	365	361	260	268	217	147	2475
1994-95	98	67	81	158	440	453	344	219	292	294	243	157	2846
1995-96	43	59	75	96	165	349	383	256	309	167	162		
1996-97		82	99	175	256	357	391	378	293	274	107	95	
1997-98	41	6	4	127	223	454	403	309	187	271	241	124	2390
1998-	52	14	56	176	333	517							

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COOLING DEGREE DAYS (base 65°F) 1998 SANTA MARIA, CA (SMX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	0	3	1	8	4	8	9	4	0	37
1970	0	0	0	0	21	1	16	0	43	2	0	0	83
1971	7	0	0	0	0	3	7	32	35	20	0	0	104
1972	0	0	2	0	1	2	19	30	19	10	0	0	83
1973	0	0	0	0	18	61	4	0	24	8	4	0	119
1974	0	0	0	0	0	0	19	12	4	11	0	0	46
1975	0	0	0	0	0	0	1	4	19	9	2	0	35
1976	0	0	0	0	7	72	13	25	40	18	6	0	181
1977	0	0	0	0	0	0	24	40	17	7	15	1	104
1978	0	0	0	0	12	0	0	25	59	2	0	0	98
1979	0	0	0	0	8	14	21	7	51	12	0	0	113
1980	0	0	0	3	0	13	20	16	19	19	2	0	92
1981	0	4	0	9	0	52	20	12	5	6	0	0	108
1982	0	0	0	0	0	2	1	8	42	21	0	0	74
1983	0	0	0	0	0	0	62	127	158	77	3	0	427
1984	0	0	0	6	26	0	84	119	212	9	0	0	456
1985	0	3	0	7	0	25	126	24	34	28	2	0	249
1986	0	2	0	2	0	0	11	14	1	7	0	0	37
1987	0	0	0	0	2	4	0	3	8	56	0	0	73
1988	0	3	15	2	2	2	56	28	13	20	11	0	152
1989	0	0	0	51	2	6	10	3	3	28	5	2	110
1990	0	0	2	0	0	6	31	38	10	13	6	0	106
1991	0	0	0	1	0	7	7	23	7	13	7	0	65
1992	0	0	0	4	3	1	50	23	14	23	7	0	125
1993	0	0	0	0	10	32	21	32	23	10	2	0	130
1994	0	0	0	0	0	4	2	25	18	18	0	0	67
1995	0	7	0	0	0	2	21	3	13	30	0	0	76
1996	0	2	0	33	19			21	4	15	0	0	
1997	0	0	0	1	38	0	8	72	111	50	24	0	304
1998	0	0	0	1	0	0	24	47	37	4	0	0	113

SNOWFALL (inches) 1998 SANTA MARIA, CA (SMX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970–71	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
1971–72	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
1972–73	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
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975–76	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	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	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	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	T	0.0	0.0	0.0	T
1986–87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	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	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	T	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	0.0	0.0	0.0	0.0	0.0	0.0
1994–95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
1995–96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0		
1996–97													
1997–98													
1998–													
POR= 53 YRS	0.0	0.0	0.0	0.0	T	T	T	T	T	0.0	0.0	0.0	T

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REFERENCE NOTES:

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).

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).

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.

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.

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.

1998
SANTA MARIA, CALIFORNIA (SMX)

Santa Maria Valley is a flat, fertile valley opening on the Pacific Ocean where it is widest and tapering inland for a distance approximately 30 miles. The valley is 10 miles wide at the site of the station, which is located 13 miles inland at an elevation of 236 feet. It is bounded by the foothills of the San Rafael Mountains, the Solomon Hills, and the Casmalia Hills ranging from 1,300 to 4,000 feet.

Located 150 miles west–northwest of Los Angeles and 250 miles south of San Francisco, Santa Maria has a maritime climate, displaying characteristics of those of both neighbors. Year–round mild temperatures moving through gradual transitions characterize the climate more than do clearly defined seasons. The annual range of temperatures is about 13 degrees, while the daily temperature range is about 20 degrees for May through September and a few degrees higher from October through April.

The area is primarily agricultural, with vegetable and other produce crops thriving successfully the year–round. Temperatures of 32 degrees or slightly lower occur about twenty–three times during the winter months and necessitate the rotation of crops to the hardier varieties during this season. Precipitation, particularly during the summer months, is insufficient for some crops and is supplemented by irrigation from subterranean water reserves. High humidity and moderate temperatures, however, substantially limit the irrigation requirement.

Based on the 1951–1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is December 5 and the average last occurrence in the spring is March 15.

The rainfall season, typical of the mid–California coast, is in the winter. About three–fourths of the total annual rainfall occurs from December through March in connection with Pacific cold fronts and storm centers passing inland. During the remainder of the year, and particularly from June to October, the northward displacement and intensification of the semipermanent Pacific anticyclone produces a circulation resulting in little or no precipitation here. Thunderstorms are rare.

During most days, clear, sunny afternoons prevail. But under the influence of the Pacific high, considerable advective and radiative cooling frequently produces nightly low stratus clouds, known as California stratus, and early–morning fog. Both clouds and fog, however, are generally dissipated before noon.

The unequal daytime solar heating over land and ocean, in conjunction with the Pacific high, gives rise to a consistent and prevailing westerly sea breeze during most afternoons. The winds generally decrease to a calm by sundown. Thus the two factors of nighttime stratus and daytime sea breezes effectively combine to maintain relatively cool days and warm nights with little diurnal change.

STATION LOCATION

SANTA MARIA, CALIFORNIA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE SEA LEVEL: GROUND TEMPERATURE SITE	ELEVATION ABOVE GROUND: WIND INSTRUMENTS	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
COOPERATIVE																
NW corner Main and Broadway Street	1/1885	5/1917		34° 58'	120°26'	212										Record by Mr. Blockman, 1885 to 1912 and by Bank of Santa Maria from 1912 to 1917.
Vicinity of 115 E Jones Street	5/1917	4/1959	6 blocks S	34° 57'	120°26'	218										Observations by City Water Employees 1917-1920. Observations after 7/1920 by Mr. A.A. Howard.
AIRPORT																
Control Tower Hangar Building, Hancock Field	6/06/38	11/23/42		34° 56'	120°25'	230	40									On call station.
Santa Maria Army Airbase	11/23/42	3/01/43	3 mi. SSW	34° 54'	120°27'	230	24	5	5				4			Six regular observations and "on call" observations.
Santa Maria Army Airbase, Hangar Bldg. #1308	3/01/43	2/14/44	Short Distance	34° 54'	120°27'	236	50	5	5			4	4			
Santa Maria Army Airbase, Building #1216	2/14/44	1/31/46	Short Distance	34° 56'	120°27'	228	53	5	5			4	4			
Hancock Field, Hangar Building, 1 mi. SE of P.O.	1/31/46	10/21/46	3 mi. NNE	34° 56'	120°25'	231	47	5	5			4	4			Program included solar radiation observations from January 1949.
Santa Maria Public Airport (former Army Airbase)	10/21/54	2/01/55	3 mi. SSW	34° 54'	120°27'	238	54	6	6			4	4			Moved to Public Airport from privately operated field.
Santa Maria Public Airport	2/01/55	2/15/72	No Change	34° 54'	120°27'	e236	c24	6	6		4	4		d5		c - 54 ft. to 5/11/63. d - Commissioned 1900 ft. SSW of office 5/11/63. e - 238 ft. to 5/11/63.
Santa Maria Public Airport	2/15/72	Present	990 ft. SE	34° 54'	120°27'	236	f24	6 g20	16	NA	19	19	NA	f5	NA	f - Same site as prior to 2/15/72. g - Moved to roof 5/25/77.
															S	ASOS Commissioned 08/01/96

* Type
M = AMOS
T = AUTOB
S = ASOS
W = AWOS

SUBSCRIPTION:
Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.

INQUIRIES/COMMENTS CALL: (828) 271-4800

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Asheville NC 28801-5001

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