

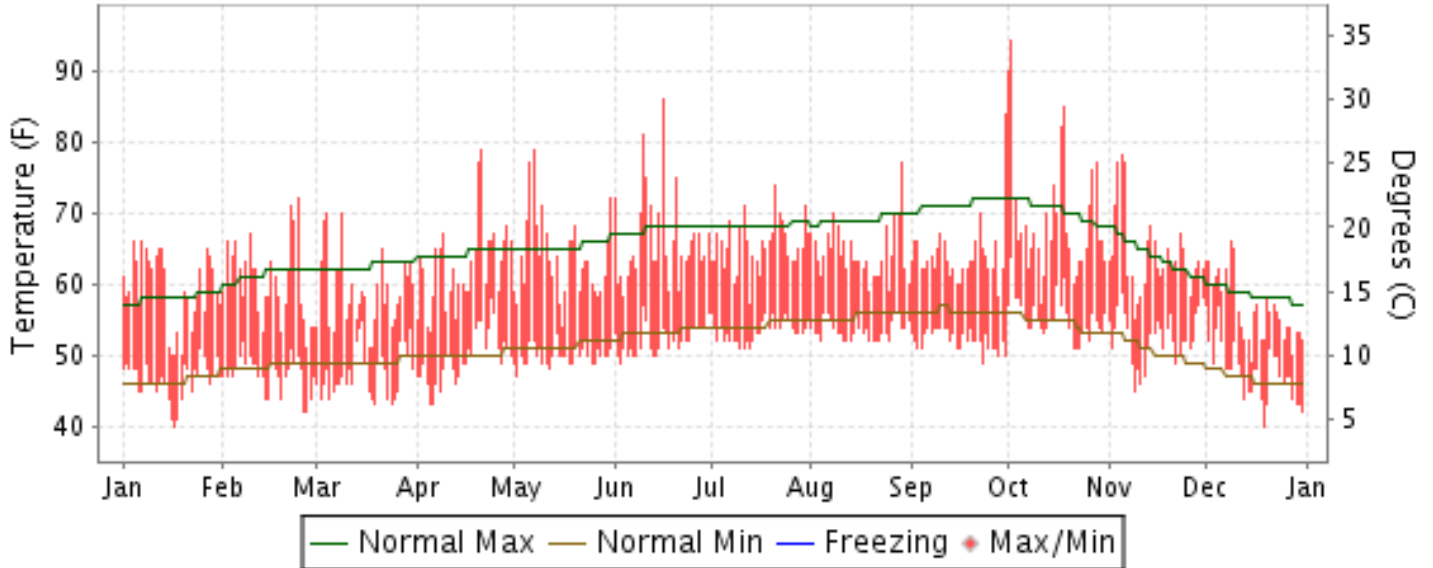


2012 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

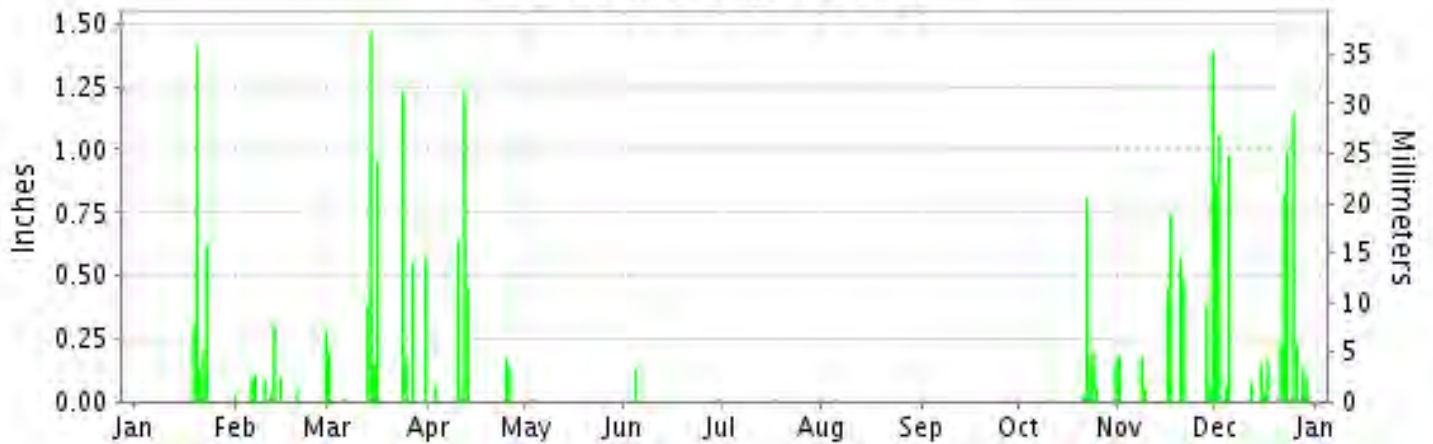
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SAN FRANCISCO C.O., CALIFORNIA (SFD)

Daily Max/Min Temperature



Daily Precipitation



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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2012

SAN FRANCISCO C.O. (SFD)

LATITUDE: 37° 46'N LONGITUDE: 122° 25'W ELEVATION (FT): GRND: 150 BARO: 75 TIME ZONE: PACIFIC (UTC -8) WBAN: 23272

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	59.3	60.4	59.0	62.6	63.7	66.3	65.4	64.5	64.0	69.2	64.0	56.5	62.9	
	HIGHEST DAILY MAXIMUM	66	72	70	79	79	86	74	77	84	94	78	66	94	
	DATE OF OCCURRENCE	07+	24	09+	21	07	16	21	29	30	02	05	09	OCT 02	
	MEAN DAILY MINIMUM	46.5	47.4	47.5	49.7	50.0	52.2	53.5	53.6	52.2	55.3	52.6	47.7	50.7	
	LOWEST DAILY MINIMUM	40	42	43	43	47	49	51	52	49	51	45	40	40	
	DATE OF OCCURRENCE	17	27+	24+	06+	02	03	13+	25+	23	23+	09	19	DEC 19	
	AVERAGE DRY BULB	52.9	53.9	53.2	56.2	56.9	59.3	59.5	59.1	58.1	62.3	58.3	52.1	56.8	
	MEAN WET BULB														
	MEAN DEW POINT														
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	0	0	2	0	0	0	2
MAXIMUM <= 32°	0	0	0	5	0	1	0	0	0	4	8	0	0	18	
MINIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	367	316	356	262	243	176	166	177	199	117	200	392	2971	
	COOLING DEGREE DAYS	0	0	0	3	1	9	0	1	2	38	8	0	62	
RH	MEAN (PERCENT)														
	HOUR 04 LST														
	HOUR 10 LST														
	HOUR 16 LST														
	HOUR 22 LST														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)														
	THUNDERSTORMS														
PR	MEAN STATION PRESS. (IN.)														
	MEAN SEA-LEVEL PRESS. (IN.)														
WINDS	RESULTANT SPEED (MPH)														
	RES. DIR. (TENS OF DEGS.)														
	MEAN SPEED (MPH)														
	PREVAIL.DIR.(TENS OF DEGS.)														
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)														
	DIR. (TENS OF DEGS.)														
	DATE OF OCCURRENCE														
MAXIMUM 3-SECOND WIND:															
SPEED (MPH)															
DIR. (TENS OF DEGS.)															
DATE OF OCCURRENCE															
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.68	1.09	5.71	2.74	0.02	0.14	0.01	0.01	0.00	1.47	4.50	7.11	25.48	
	GREATEST 24-HOUR (IN.)	1.44	0.34	1.50	1.24	0.02	0.13	0.01	0.01	0.00	0.81	1.39	1.58	1.58	
	DATE OF OCCURRENCE	20-21	12-13	13-14	12	03-04	04	17	05		22	30	01-02	DEC 01-02	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	5	10	10	7	2	2	1	1	0	7	10	16	71	
PRECIPITATION 0.10	5	4	9	5	0	1	0	0	0	4	8	12	48		
PRECIPITATION 1.00	1	0	2	1	0	0	0	0	0	0	1	3	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 SAN FRANCISCO C.O. (SFD)

LATITUDE: 37° 46'N LONGITUDE: 122° 25'W ELEVATION (FT): GRND: 150 BARO: 75 TIME ZONE: PACIFIC (UTC -8) WBAN: 23272

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	56.9	60.2	61.8	63.1	64.3	66.4	66.5	68.1	70.2	69.2	63.1	57.1	63.9
	MEAN DAILY MAXIMUM	92	56.5	59.8	61.5	62.7	64.0	66.1	65.9	66.7	69.8	69.2	63.7	57.4	63.6
	HIGHEST DAILY MAXIMUM	76	79	81	84	94	101	103	103	98	101	102	86	76	103
	YEAR OF OCCURRENCE		1962	1986	2004	1989	2001	2000	1988	2010	1971	1987	1966	1958	JUN 2000
	MEAN OF EXTREME MAXS.	92	65.7	70.3	74.9	78.9	81.9	84.2	80.2	81.6	88.9	86.1	75.6	66.4	77.9
	NORMAL DAILY MINIMUM	30	45.7	47.5	48.5	49.2	51.0	52.8	54.1	55.1	55.1	53.7	50.1	46.1	50.7
	MEAN DAILY MINIMUM	92	45.7	48.0	48.9	49.7	51.2	53.0	53.8	54.6	55.6	54.5	51.1	47.0	51.1
	LOWEST DAILY MINIMUM	76	30	31	38	40	43	47	47	48	48	45	40	28	28
	YEAR OF OCCURRENCE		1937	1989	1942	2009	2003	1999	1953	1969	1955	1949	1994	1990	DEC 1990
	MEAN OF EXTREME MINS.	92	39.4	42.0	43.6	45.0	47.6	49.9	50.8	51.6	51.7	49.9	45.2	40.5	46.4
	NORMAL DRY BULB	30	51.3	53.9	55.1	56.2	57.6	59.6	60.3	61.6	62.7	61.5	56.6	51.6	57.3
	MEAN DRY BULB	92	48.9	53.9	55.2	56.2	57.6	59.6	59.8	60.7	62.7	61.8	57.4	51.6	57.1
	MEAN WET BULB														
	MEAN DEW POINT														
	NORMAL NO. DAYS WITH:														
	MAXIMUM >= 90	30	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.2	0.7	0.5	0.0	0.0	2.0
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	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 <= 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	425	313	307	273	236	174	155	120	100	136	254	415	2908
	NORMAL COOLING DEG. DAYS	30	0	0	2	7	8	12	10	15	30	26	2	0	112
RH	NORMAL (PERCENT)	30													
	hour 04 LST	30													
	hour 10 LST	30													
	hour 16 LST	30													
	hour 22 LST	30													
S	PERCENT POSSIBLE SUNSHINE	38	56	62	69	73	72	73	66	65	72	70	62	53	66
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI) THUNDERSTORMS	13 40	0.0 0.0	0.0 0.2	0.0 0.0	0.0 0.1	0.0 0.0	0.0 0.0	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.0	0.0 0.8
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR														
	PARTLY CLOUDY														
	CLOUDY														
PR	MEAN STATION PRESSURE(IN)														
	MEAN SEA-LEVEL PRES. (IN)														
WINDS	MEAN SPEED (MPH)	28	6.7	7.5	8.5	9.5	10.4	10.9	11.2	10.5	9.1	7.6	6.3	6.5	8.7
	PREVAIL.DIR.(TENS OF DEGS)														
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	36	47	47	44	38	38	40	38	34	32	43	41	45	47
	DIR. (TENS OF DEGS)		14	23	18	27	27	27	27	27	27	14	18	14	14
	YEAR OF OCCURRENCE		1965	1938	1948	1965	1965	1965	1939	1966	1956	1950	1953	1965	JAN 1965
	MAXIMUM 3-SECOND														
	SPEED (MPH)														
	DIR. (TENS OF DEGS)														
	YEAR OF OCCURRENCE														
PRECIPITATION	NORMAL (IN)	30	4.50	4.46	3.26	1.46	0.70	0.16	0.00	0.06	0.21	1.12	3.16	4.56	23.65
	MAXIMUM MONTHLY (IN)	76	12.08	14.89	9.04	5.47	3.92	2.02	0.62	0.78	2.06	5.51	10.49	12.03	14.89
	YEAR OF OCCURRENCE		1998	1998	1983	1958	1998	2011	1974	1976	1959	1962	1994	2002	FEB 1998
	MINIMUM MONTHLY (IN)	76	0.31	0.04	0.07	T	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00
	YEAR OF OCCURRENCE		1976	1953	1988	1949	1982	1983	1982	1982	1980	1980	1959	1989	DEC 1989
	MAXIMUM IN 24 HOURS (IN)	76	4.22	3.22	3.65	2.36	1.47	1.36	0.61	2.05	2.06	3.11	6.19	3.69	6.19
	YEAR OF OCCURRENCE		1982	2008	1940	1953	1990	1967	1974	2006	1959	1962	1994	1995	NOV 1994
	NORMAL NO. DAYS WITH:														
PRECIPITATION >= 0.01	30	11.7	11.1	11.0	6.5	3.8	1.5	0.3	1.0	1.7	3.9	8.9	11.6	73.0	
PRECIPITATION >= 1.00	30	1.1	1.2	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.7	1.1	5.0	
SNOWFALL	NORMAL (IN)	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	MAXIMUM MONTHLY (IN)	42	T	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T
	YEAR OF OCCURRENCE		1962	1951	1951									1972	DEC 1972
	MAXIMUM IN 24 HOURS (IN)	38	T	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T
	YEAR OF OCCURRENCE		1962	1951	1951									1941	JAN 1962
	MAXIMUM SNOW DEPTH (IN)	52	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) 2012 SAN FRANCISCO C.O. (SFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1983	5.77	8.06	9.04	3.48	0.47	0.00	0.01	0.06	0.68	0.26	8.20	7.72	43.75
1984	0.50	2.34	1.32	0.92	0.16	0.30	0.00	0.24	0.10	2.94	7.45	2.10	18.37
1985	0.59	1.98	3.94	0.27	0.09	0.31	0.00	0.00	0.38	0.80	4.83	2.47	15.66
1986	4.77	8.29	6.25	0.76	0.13	0.00	0.03	0.01	1.32	0.11	0.20	1.64	23.51
1987	4.26	3.77	2.31	0.14	0.06	0.01	0.00	0.00	0.00	1.07	3.09	5.09	19.80
1988	4.93	0.40	0.07	1.73	0.66	0.70	0.00	0.00	0.00	0.64	3.70	4.23	17.06
1989	1.26	1.49	5.28	0.70	0.06	0.07	0.00	0.05	0.98	1.18	1.33	0.00	12.40
1990	4.02	2.45	1.34	0.58	2.38	0.01	0.00	0.04	0.12	0.20	0.52	1.94	13.60
1991	0.60	3.29	5.89	1.07	0.36	0.05	0.00	0.42	0.00	2.35	0.50	2.32	16.85
1992	2.09	6.34	4.41	0.38	0.00	0.39	0.00	0.02	0.00	1.16	0.40	6.03	21.22
1993	9.82	4.48	2.90	0.71	0.87	0.27	0.00	0.00	0.00	0.33	2.16	2.25	23.79
1994	2.77	4.87	0.35	1.12	1.31	0.06	0.00	0.00	0.22	0.33	10.49	2.69	24.21
1995	8.97	0.24	7.88	1.61	0.97	0.62	0.00	0.00	0.00	0.06	0.08	8.13	28.56
1996	6.71	5.28	1.28	1.56	1.79	0.00	0.0	0.0	.04	1.05	4.73	7.63	30.07
1997	7.59	0.32	0.58	0.29	0.16	0.30	0.00	0.73	0.04	1.00	6.97	2.77	20.75
1998	12.08	14.89	2.54	2.13	3.92	0.15	0.01	0.01	0.09	0.91	4.02	1.42	42.17
1999	4.41	7.35	2.34	2.62	0.23	0.12	0.00	0.10	0.59	0.65	2.32	0.62	21.35
2000	6.41	8.96	2.04	1.66	1.40	0.16	0.02	0.02	0.21	2.38	0.85	0.90	25.01
2001	3.76	7.73	1.58	1.89	0.00	0.15	0.01	0.05	0.18	0.51	5.18	10.75	31.79
2002	2.13	2.59	2.27	0.52	0.84	0.03	0.00	0.03	0.01	0.01	2.00	12.03	22.46
2003	1.75	1.80	1.71	3.60	0.93	0.00	0.00	0.06	0.00	0.04	2.22	7.69	19.80
2004	3.40	5.67	1.16	0.12	0.12	0.00	0.00	0.05	0.04	2.62	2.07	7.98	23.23
2005	4.82	5.19	4.67	2.19	1.32	0.94	0.02	0.01	0.00	0.51	2.21	11.19	33.07
2006	3.52	2.81	8.74	5.02	0.41	0.00	0.00	0.00	0.00	0.63	3.05	5.31	29.49
2007	0.72	4.79	0.52	1.44	0.43	0.00	0.02	0.00	0.09	2.01	0.96	3.16	14.14
2008	8.86	1.87	0.33	0.14	0.03	0.00	0.00	0.01	0.00	0.35	2.31	2.82	16.72
2009	0.90	7.92	2.76	0.24	0.80	0.00	0.00	0.00	0.28	3.11	0.45	2.77	19.23
2010	6.66	3.42	2.79	3.59	0.95	0.07	0.00	0.01	0.02	1.81	3.10	6.71	29.13
2011	1.55	4.94	7.02	0.56	1.13	2.02	0.08	0.03	0.00	1.38	1.74	0.14	20.59
2012	2.68	1.09	5.71	2.74	0.02	0.14	0.01	0.01	0.00	1.47	4.50	7.11	25.48
POR= 92 YRS	4.27	3.72	2.95	1.50	0.55	0.17	0.02	0.05	0.19	1.10	2.65	4.04	21.21

WBAN : 23272

AVERAGE TEMPERATURE (°F) 2012 SAN FRANCISCO C.O. (SFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1983	49.4	54.6	55.3	56.8	59.7	61.8	63.4	65.9	67.1	64.0	56.1	52.8	58.9
1984	51.6	52.6	56.7	54.2	59.9	59.7	63.9	62.8	69.4	61.5	56.0	50.9	58.3
1985	50.0	56.0	53.2	59.8	58.1	63.9	64.1	64.1	64.1	63.2	55.0	51.3	58.6
1986	56.6	58.9	60.4	58.6	60.0	63.2	62.8	61.9	62.8	63.6	60.2	52.5	60.1
1987	51.8	56.4	57.1	60.5	61.1	60.5	61.5	63.5	63.8	65.1	58.8	52.3	59.4
1988	52.8	57.7	59.1	58.8	59.1	61.1	64.2	64.0	63.1	61.5	57.3	53.3	59.3
1989	51.3	50.0	55.4	60.9	59.3	61.6	62.4	63.0	61.8	62.0	58.8	52.6	58.3
1990	52.8	52.0	54.9	59.2	59.0	62.4	62.9	65.3	66.0	64.2	58.0	49.1	58.8
1991	53.4	57.9	53.2	57.1	56.8	58.6	61.3	63.0	63.1	64.4	60.1	53.4	58.5
1992	51.5	58.4	59.2	62.6	62.7	62.5	65.1	63.8	65.8	66.7	59.8	51.7	60.8
1993	51.1	53.8	59.0	59.4	62.5	65.9	63.4	66.6	63.4	64.3	58.2	51.5	59.9
1994	53.7	52.7	58.1	57.6	58.7	61.1	59.7	63.4	63.7	62.2	51.9	49.6	57.7
1995	54.1	56.9	56.2	56.9	57.4	61.7	66.0	64.1	64.7	64.6	60.9	55.5	59.9
1996	54.1	57.1	58.8	61.4	61.7	62.8	63.7	63.7	63.6	62.8			55.9
1997	52.7	56.1	58.2	58.1	62.6	61.6	62.3	65.8	67.8	62.5	59.3	53.9	60.1
1998	53.6	52.7	55.7	55.5	56.6	59.3	60.1	61.1	61.7	60.6	55.2	50.0	56.8
1999	50.5	51.5	51.2	54.9	53.7	56.4	58.7	60.9	61.5	62.4	57.8	54.2	56.1
2000	52.7	53.9	54.9	57.1	58.3	59.5	58.3	60.7	64.7	59.5	53.8	54.0	57.3
2001	51.4	52.1	55.9	52.5	61.5	61.3	60.5	61.5	61.0	62.7	58.6	52.8	57.7
2002	50.7	55.5	53.9	54.9	55.0	58.1	59.2	60.4	61.6	60.8	59.4	54.2	57.0
2003	56.3	54.6	56.5	53.9	58.1	60.5	59.4	63.5	64.9	63.0	55.4	52.9	58.3
2004	51.8	53.7	60.3	58.5	58.2	59.0	60.7	62.8	64.9	60.0	56.5	53.5	58.3
2005	50.3	55.9	57.5	55.9	59.1	59.3	61.0	59.8	59.7	60.5	60.3	55.5	57.9
2006	52.6	54.7	50.9	54.9	57.4	60.2	61.7	59.6	59.6	60.7	56.3	52.4	56.8
2007	50.0	53.0	57.0	55.4	57.3	59.1	61.5	62.0	63.4	60.4	57.3	50.8	57.3
2008	49.8	53.2	54.5	54.9	57.6	59.6	60.5	61.9	63.4	63.4	59.1	50.4	57.4
2009	54.1	52.9	54.1	55.9	57.7	60.5	59.2	62.6	63.5	61.1	57.4	50.3	57.4
2010	51.7	54.5	55.2	55.0	56.2	59.3	58.4	59.3	63.2	60.6	56.1	53.1	56.9
2011	51.7	52.0	54.4	55.3	55.7	58.8	60.1	59.9	62.5	63.3	54.7	52.3	56.7
2012	52.9	53.9	53.2	56.2	56.9	59.3	59.5	59.1	58.1	62.3	58.3	52.1	56.8
POR= 92 YRS	48.9	53.9	55.2	56.2	57.6	59.6	59.8	60.7	62.7	61.8	57.4	51.6	57.1

HEATING DEGREE DAYS (base 65°F) 2012 SAN FRANCISCO C.O. (SFD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1983-84	83	14	30	52	257	369	408	354	251	321	172	159	2470
1984-85	70	84	19	117	263	430	459	254	359	173	209	57	2494
1985-86	71	49	35	99	302	419	254	172	146	196	154	67	1964
1986-87	78	93	63	84	152	383	399	233	243	140	154	147	2169
1987-88	106	52	50	60	179	387	370	207	183	197	196	125	2112
1988-89	60	53	79	137	229	358	419	416	289	171	181	129	2521
1989-90	86	68	94	113	183	377	371	357	305	170	188	97	2409
1990-91	74	23	8	56	204	487	351	192	358	234	248	188	2423
1991-92	129	74	74	74	150	350	414	186	171	87	75	76	1860
1992-93	30	51	28	31	163	406	423	310	178	163	90	49	1922
1993-94	73	33	74	63	204	411	346	339	211	215	188	134	2291
1994-95	163	70	54	95	384	471	331	221	268	236	227	133	2653
1995-96	30	63	43	68	117	286	334	226	191	139	131	109	1737
1996-97	69	58	74	112	275	375	375	242	206	200	110	97	2393
1997-98	83	16	4	100	184	338	345	339	284	282	253	165	2393
1998-99	156	127	107	145	287	458	441	373	421	314	341	252	3422
1999-00	192	126	135	115	215	326	374	318	312	237	217	186	2753
2000-01	197	131	62	168	327	336	417	355	280	367	138	119	2897
2001-02	142	100	124	105	187	370	436	261	338	299	300	214	2876
2002-03	179	155	130	159	163	327	262	283	263	325	220	162	2628
2003-04	171	60	73	121	282	368	404	320	173	215	207	177	2571
2004-05	127	79	68	180	249	350	447	251	228	266	175	163	2583
2005-06	123	161	156	137	149	289	383	281	428	297	239	150	2793
2006-07	124	160	163	141	278	384	457	328	247	279	261	177	2999
2007-08	105	100	69	150	227	433	466	466	316	304	257	190	3083
2008-09	144	102	94	90	185	466	331	332	331	289	230	132	2726
2009-10	180	97	74	122	228	331	402	288	300	294	266	173	2755
2010-11	197	193	102	162	276	402	405	362	330	289	288	192	3198
2011-12	149	152	96	83	304	405	367	316	356	262	243	176	2909
2012-	166	177	199	117	200	392							

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COOLING DEGREE DAYS (base 65°F) 2012 SAN FRANCISCO C.O. (SFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1983	0	0	0	0	16	21	41	50	101	27	0	0	256
1984	0	0	0	5	20	5	42	20	158	14	0	0	264
1985	0	7	0	24	2	28	50	27	16	49	8	0	211
1986	0	7	10	8	6	22	17	1	4	49	12	0	136
1987	0	0	5	12	38	19	5	14	22	68	0	0	183
1988	0	3	6	18	20	12	42	27	30	34	3	0	195
1989	0	0	0	56	9	35	15	12	5	28	2	0	162
1990	0	0	0	5	8	25	18	39	45	40	1	0	181
1991	0	0	0	3	1	5	20	20	26	62	9	0	146
1992	0	2	0	21	13	9	41	23	61	93	10	0	273
1993	0	0	0	1	21	82	32	88	31	48	7	0	310
1994	0	0	5	0	3	22	4	29	24	19	0	0	106
1995	0	0	0	3	0	40	70	43	43	63	4	0	266
1996	0	3	4	39	38	49	34	26	37	53	0	0	257
1997	0	0	7	1	44	2	5	47	97	30	24	0	257
1998	0	0	0	2	0	2	11	12	17	15	0	0	59
1999	0	0	0	17	0	1	4	5	38	40	3	0	108
2000	0	0	7	11	16	27	0	4	61	7	0	0	133
2001	0	0	1	0	40	15	10	1	14	38	2	0	121
2002	0	3	0	0	0	10	4	19	33	34	1	0	104
2003	0	0	7	0	11	36	2	21	76	64	0	0	217
2004	0	0	34	26	1	0	0	20	69	33	0	0	183
2005	0	0	2	0	0	0	6	9	5	8	12	0	42
2006	0	0	0	0	3	13	32	0	8	15	0	0	71
2007	0	0	6	0	19	11	1	12	30	16	1	0	96
2008	0	0	0	8	33	34	11	16	51	48	16	0	217
2009	0	0	0	24	11	3	7	31	36	9	7	0	128
2010	0	0	3	0	0	7	0	26	54	32	17	0	139
2011	0	4	8	3	3	10	5	0	26	38	0	0	97
2012	0	0	0	3	1	9	0	1	2	38	8	0	62

SNOWFALL (inches) 2012 SAN FRANCISCO C.O. (SFD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1967-68	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
1968-69	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
1969-70	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
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	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973-74													
1975-76													
1976-77													
1977-78													
1978-79													
1979-80													
1980-81													
1981-82													
1982-83													
1983-84													
1984-85													
1996-97													
1997-98							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999-00	0.0	0.0	0.0										
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-													
POR= 68 YRS	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T

WBAN : 23272

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: http://www.ncdc.noaa.gov/homr/ SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p>NOTE:</p> <p>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> <p>The 2012 Annual Publications were reproduced on 6/05/13 to correct two problems that occurred when the Publications were first produced on 02/28/13.</p> <ol style="list-style-type: none"> 1) A small number of stations did not correctly show number of days with thunderstorms and heavy fog. 2) Climate Normals in the Annual Publications were based on a first edition of the 1981-2010 Normals release. With the release of Service Pack 1 (SP1) new normals for 83 stations are available and now included. Additional information on SP1 is available at: http://www1.ncdc.noaa.gov/pub/data/normals/1981-2010/status.txt.
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2012

SAN FRANCISCO DOWNTOWN CALIFORNIA (SFD)

San Francisco is located at the northern end of a narrow peninsula which separates San Francisco Bay from the Pacific Ocean. It is known as the air conditioned city with cool pleasant summers and mild winters. Flowers bloom throughout the year and warm clothing may be needed at times during any month.

Precipitation averages about 20 inches a year with pronounced wet and dry seasons, characteristic of its Mediterranean climate. Little or no rain falls from June through September while about 80 percent of the annual total falls from November through March. Snow is extremely rare. Measurable amounts fall about once every 15 years. Freezing temperatures are also extremely rare. On average, thunderstorms occur on only two days each year. The average annual wind speed is about 9 mph with lighter winds, 6 to 7 mph, occurring in the winter and stronger winds, 10 to 11 mph, in the summer.

San Francisco probably has greater climatic variability by far with respect to temperature, cloudiness, and sunshine within its 49 square mile area than any other similarly sized urban area in the country. Likewise, the San Francisco Bay area has considerably more variability than San Francisco itself.

Sea fogs, and the low stratus clouds associated with them are most common in the summertime, but may occur at any time of the year. In the summer the temperature of the Pacific Ocean is much lower than the temperature inland, particularly in the Central Valley of California. This condition tends to enhance the sea breeze effect common to coastal areas. Brisk westerly winds blow throughout the afternoon and evening hours. The fog is carried inland by these westerly winds in the late afternoon and evening and then evaporates during the subsequent forenoon.

The complex topography of San Francisco causes complex patterns of fog and sun as well as temperature. A range of hills with elevations of nearly 1000 feet above sea level, bisects the city from north to south. This range partially blocks the inland movement of the fog, but gaps in the hills permit small masses of fog to pass through, further complicating the pattern. Occasionally, the fog will reach 50 miles south to San Jose, while the area just to the lee of the highest hills is still mostly clear.

Sunshine varies greatly from one part of the city to another, especially in the summer. Spring and fall are the sunniest seasons. In the summer the sunniest area is a triangular shaped area to the lee of the highest hills and extending to the bay. The least sunny area is along the ocean due to the high frequency of fog there. The percent of possible summer sunshine varies from an estimated 25 to 35 percent at the ocean to 70 to 80 percent in the sunniest area.

The extent and behavior of the summertime fog on a particular day depends on several factors. A typical day would find the fog covering the entire city at sunrise and little wind. During the forenoon the skies become sunny in the eastern part of the city with some partial clearing reaching the ocean for a couple of hours in the early afternoon. By early afternoon the winds pick up and by late afternoon the fog is rolling inland again. The wind usually reaches a maximum velocity in the early evening.

In the winter relatively little difference in the climate is observed from one part of the city to another. This is due to the lack of temperature contrast between the ocean and the land and to the relative frequency of passage of Pacific frontal systems. However, those areas near the ocean have more sunshine than areas further inland. The source region for fog is inland during winter, mainly in the Central Valley, rather than the ocean.

Temperature patterns in the city are the same as those of sunshine. In the winter there is little variation, with average maximums from 55 to 60 degrees and average minimums in the mid to upper 40s. Average temperatures rise until June and remain nearly constant through August with average maximums in the lower 60s near the ocean and upper 60s in the sunny eastern half of the city. Summer minimums range from 50 to 55. The warmest time of the year is September and October when the fog diminishes greatly and some of the warmth from the Central Valley flows westward. At this time of year the average maximums are in the mid 60s near the ocean and in the mid 70s in the warmest areas of the city. The average minimums are about the same as they are during the summer.

Station History

SAN FRANCISCO C.O., CA

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
SAN FRANCISCO DOWNTOWN	2007-01-26	2011-04-15	37° 46'	-122° 25'	150	.4 MI E	COOP
SAN FRANCISCO WSO CITY	1936-01-01	1959-01-01	37° 46'	-122° 25'	125		COOP,WXSVC
SAN FRANCISCO MISSION DOLORES	1988-01-01	1997-06-11	37° 46'	-122° 25'	75		COOP
SAN FRANCISCO WSO CITY	1890-01-01	1893-01-01	37° 46'	-122° 24'			WXSVC
SAN FRANCISCO WSO CITY	1893-01-01	1906-01-01	37° 48'	-122° 24'			WXSVC
SAN FRANCISCO DOWNTOWN	1997-06-11	2003-02-12	37° 46'	-122° 26'	175	.5 MI NW	COOP
SAN FRANCISCO DOWNTOWN	2003-02-12	2007-01-26	37° 46'	-122° 25'	175		COOP
SAN FRANCISCO DOWNTOWN	2011-04-15	Present	37° 46'	-122° 25'	150		COOP
SAN FRANCISCO WSO CITY	1907-01-01	1931-01-01	37° 48'	-122° 24'			WXSVC
SAN FRANCISCO WSO CITY	1959-01-01	1981-12-31	37° 46'	-122° 25'	52		COOP,WXSVC
SAN FRANCISCO WSO CITY	1981-12-31	1982-01-01	37° 46'	-122° 25'	52		COOP
SAN FRANCISCO WSO CITY	1982-01-01	1983-04-18	37° 46'	-122° 25'	130		COOP
SAN FRANCISCO MISSION DOLORES	1983-04-18	1988-01-01	37° 46'	-122° 25'	75	1.3 MI SW	COOP
SAN FRANCISCO WSO CITY	1888-06-01	1890-01-01	37° 48'	-122° 24'			WXSVC
SAN FRANCISCO WSO CITY	1906-01-01	1907-01-01	37° 46'	-122° 27'			WXSVC
SAN FRANCISCO WSO CITY	1931-01-01	1936-01-01	37° 48'	-122° 24'	207		COOP,WXSVC

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	1982-01-01	1983-04-18	DAILY	2400			
PRECIP	1992-10-28	1995-07-01	HOURLY	2400			
PRECIP	1982-01-01	1983-04-18	DAILY	2400			
PRECIP	2007-01-26	2011-04-22	HOURLY	2400	TB	RCRD	
PRECIP	1983-04-18	1988-01-01	HOURLY	2400			
TEMP	2007-01-26	2011-04-22	DAILY	2400	HYGR		
PRECIP	2011-04-22	Present	HOURLY	2400	TB	RCRD	
TEMP	1888-06-01	1982-01-01	DAILY	2400			
PRECIP	1995-07-01	2007-01-26	DAILY	2400	TB	RCRD	ROOF
PRECIP	1982-01-01	1983-04-18	HOURLY	2400			
TEMP	2011-04-22	Present	DAILY	2400	HYGR		
TEMP	1988-01-01	1992-10-28	DAILY	2400	MXMN		ROOF
PRECIP	1995-07-01	2007-01-26	HOURLY	2400	TB	RCRD	ROOF
PRECIP	1992-10-28	1995-07-01	DAILY	2400	TB	RCRD	ROOF
TEMP	1995-07-01	2007-01-26	DAILY	2400	HYGR		ROOF
PRECIP	2007-01-26	2011-04-22	DAILY	2400	PCPN1		
DEWPNTTEMP	2007-01-26	2009-06-01	DAILY	2400	HYGR		
PRECIP	1888-06-01	1982-01-01	DAILY	2400			
PRECIP	1983-04-18	1988-01-01	DAILY	2400	TB	RCRD	ROOF
TEMP	1983-04-18	1988-01-01	DAILY	2400	TEMPX		ROOF
PRECIP	1988-01-01	1992-10-28	DAILY	2400	TB	RCRD	ROOF
PRECIP	1988-01-01	1992-10-28	HOURLY	2400			
TEMP	1992-10-28	1995-07-01	DAILY	2400	HYGR		ROOF
PRECIP	2011-04-22	Present	DAILY	2400	PCPNX		

* 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>

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