

1998

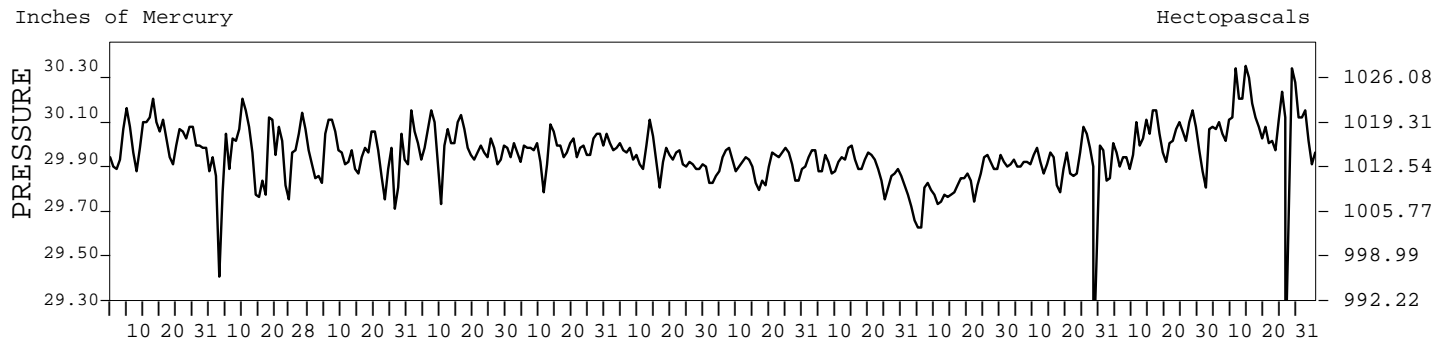
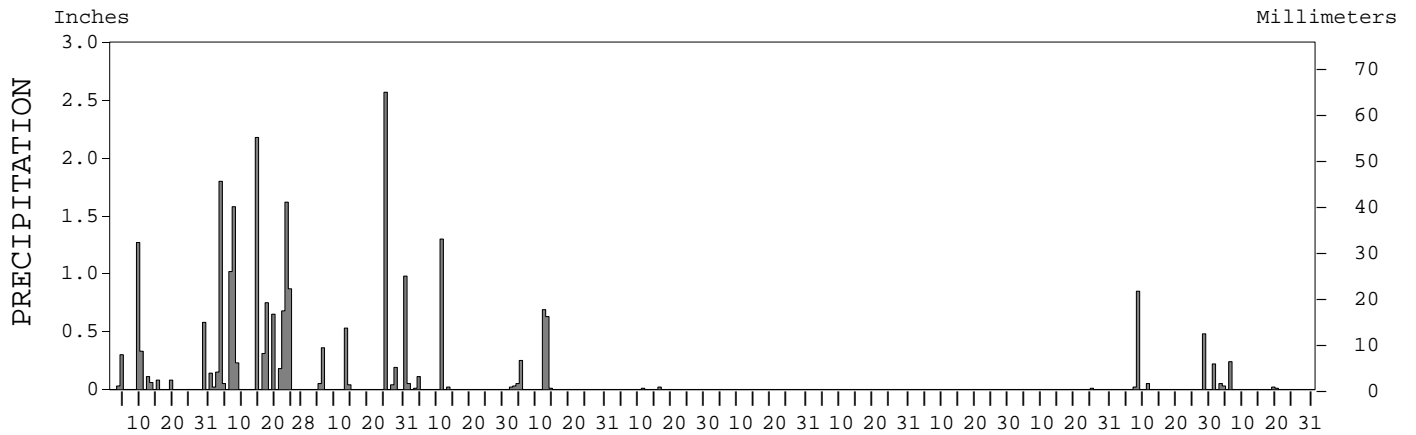
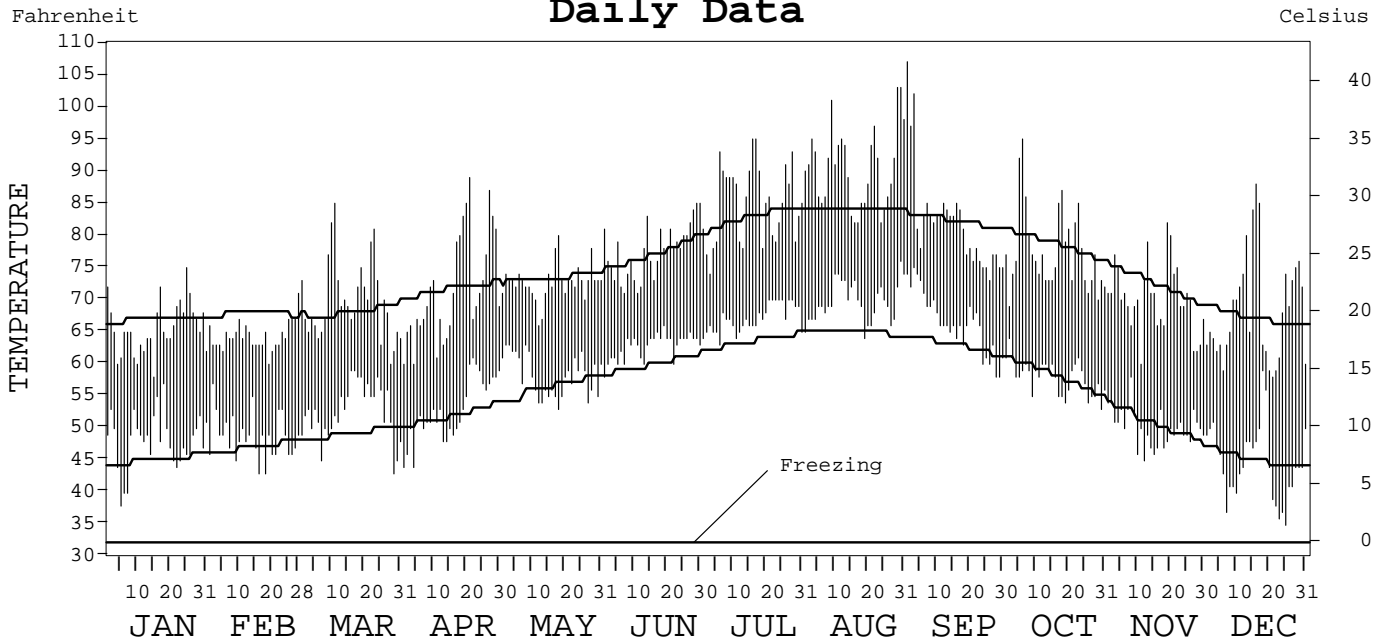
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-0742

LONG BEACH,
CALIFORNIA (LGB)

Daily Data



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METEOROLOGICAL DATA FOR 1998

LONG BEACH, CA (LGB)

LATITUDE: 33° 49' 42" N LONGITUDE: 118° 09' 47" W ELEVATION (FT): GRND: 25 BARO: 68 TIME ZONE: PACIFIC (UTC+ 8) WBAN: 23129

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	65.6	64.4	69.9	71.7	72.7	77.6	85.0	90.5	82.0	77.6	70.2	68.4	74.6	
	HIGHEST DAILY MAXIMUM	75	71	85	89	80	85	95	103	107	95	82	88	107	
	DATE OF OCCURRENCE	25	28	11	21	18	30+	17+	30+	01	06	19	16	SEP 01	
	MEAN DAILY MINIMUM	48.0	48.8	52.6	52.8	58.3	62.7	67.1	69.6	66.5	57.9	50.1	44.5	56.6	
	LOWEST DAILY MINIMUM	38	43	43	44	53	58	63	64	58	53	45	35	35	
	DATE OF OCCURRENCE	05	18+	29	04+	18	01	06	19	29+	30	12	25	DEC 25	
	AVERAGE DRY BULB	56.8	56.6	61.3	62.3	65.5	70.2	76.1	80.1	74.3	67.8	60.2	56.5	65.6	
	MEAN WET BULB		53.7	56.8	55.8	59.3	63.1	67.5	69.4	66.8		54.6			
	MEAN DEW POINT		50.5	53.4	50.6	54.7	59.2	63.9	65.0	63.3		50.2			
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	8	17	3	2	0	0	0	30
MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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	243	232	120	116	16	0	0	0	0	7	139	263	1136	
	COOLING DEGREE DAYS	0	0	13	39	39	161	347	475	286	99	0	7	1466	
RH	MEAN (PERCENT)	86	80	78	69	70	72	73	68	74	68	74	62	73	
	HOUR 04 LST	95	88	90	81	83	84	86	83	83	79	84	78	84	
	HOUR 10 LST	82	78	70	59	64	66	67	60	67	56	67	50	66	
	HOUR 16 LST	71	71	65	53	59	58	58	50	59	52	58	47	58	
	HOUR 22 LST	92	82	83	77	74	77	81	75	81	77	83	71	79	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	4	0	0	1	0	0	1	1	1	0	3	6	17	
	THUNDERSTORMS	0	0	1	0	0	0	0	1	1	0	0	0	3	
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.)	29.98	29.92	29.91	29.96	29.95	29.91	29.87	29.86	29.79		29.98			
	MEAN SEA-LEVEL PRESS. (IN.)	30.02	29.96	29.95	30.00	29.99	29.95	29.91	29.90	29.83		30.02			
WINDS	RESULTANT SPEED (MPH)	0.9	1.9	2.5	3.5	3.2	2.1	1.5	0.6	2.1		1.2			
	RES. DIR. (TENS OF DEGS.)	24	22	24	25	21	22	23	26	24		24			
	MEAN SPEED (MPH)	3.2	6.5	5.6	6.1	6.6	6.3	5.8	5.6	5.6	4.3	3.7	4.3	5.3	
	PREVAIL. DIR. (TENS OF DEGS.)	29	27	29	27	19	29	29	29	29	28	29	28	29	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	20	30	32	24	21	18	17	18	26	22	22	33	33	
	DIR. (TENS OF DEGS.)	27	12	22	25	13	29	28	29	10	10	30	31	31	
	DATE OF OCCURRENCE	29+	03	25	06	04	03	26	30	02	05	09	06	DEC 06	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	25	40	45	29	28	23	21	25	33	24	24	45	45	
DIR. (TENS OF DEGS.)	27	11	18	25	15	26	27	17	10	10	18	32	32		
DATE OF OCCURRENCE	29	03	25	06	04	05+	26	09	02	05	28+	06	DEC 06		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.98	12.09	4.76	1.49	1.68	0.03	T	T	T	0.01	1.40	0.57	25.01	
	GREATEST 24-HOUR (IN.)	1.44	2.37	2.57	1.30	1.31	0.02	T	T	T	0.01	0.87	0.24	2.57	
	DATE OF OCCURRENCE	09-10	23-24	25	11	12-13	16	03	10+	20+	25	07-08	06	MAR 25	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	10	15	8	5	7	2	0	0	0	1	4	6	58	
PRECIPITATION ≥ 0.10	6	13	5	2	3	0	0	0	0	0	2	2	33		
PRECIPITATION ≥ 1.00	1	5	1	1	0	0	0	0	0	0	0	0	8		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

LONG BEACH, CA (LGB)

LATITUDE: 33° 49' 42" N LONGITUDE: 118° 09' 47" W ELEVATION (FT): GRND: 25 BARO: 68 TIME ZONE: PACIFIC (UTC+ 8) WBAN: 23129

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	66.8	67.7	68.0	71.5	73.3	77.0	82.7	84.0	82.1	78.4	72.1	67.0	74.2
	MEAN DAILY MAXIMUM	49	65.8	67.0	67.8	71.2	73.1	76.7	82.2	83.5	82.0	77.8	72.4	67.0	73.9
	HIGHEST DAILY MAXIMUM	46	91	91	98	105	103	109	107	105	110	111	101	92	111
	YEAR OF OCCURRENCE		1976	1995	1988	1989	1967	1981	1985	1967	1963	1961	1966	1958	OCT 1961
	MEAN OF EXTREME MAXS.	49	81.0	81.4	82.6	87.3	87.6	89.9	93.5	95.1	97.8	95.2	88.1	81.2	88.4
	NORMAL DAILY MINIMUM	30	44.9	46.9	49.0	51.8	56.3	59.8	63.4	64.8	62.7	57.8	50.4	45.0	54.4
	MEAN DAILY MINIMUM	49	45.0	46.8	49.0	51.9	56.1	59.6	63.3	64.3	62.3	57.5	50.4	45.2	54.3
	LOWEST DAILY MINIMUM	46	25	33	33	38	40	47	51	52	50	39	34	28	25
	YEAR OF OCCURRENCE		1963	1965	1964	1975	1964	1967	1960	1951	1965	1972	1958	1990	JAN 1963
	MEAN OF EXTREME MINS.	49	35.8	38.9	40.6	44.4	49.2	53.5	58.2	58.7	56.0	48.9	40.9	36.2	46.8
	NORMAL DRY BULB	30	55.9	57.3	58.5	61.7	64.8	68.5	73.1	74.4	72.4	68.1	61.3	56.0	64.3
	MEAN DRY BULB	49	55.2	56.9	58.5	61.6	64.5	68.1	72.7	73.9	72.1	67.6	61.4	56.1	64.0
	MEAN WET BULB	14	50.4	52.1	54.1	56.5	59.2	62.1	60.9	61.7	60.6	60.6	54.0	49.8	56.8
	MEAN DEW POINT	14	39.7	42.1	44.5	47.0	50.5	53.6	56.9	57.5	56.2	55.0	46.0	41.7	49.2
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.1	0.1	0.2	0.9	1.1	1.8	3.9	5.3	5.5	3.2	0.8	0.0	22.9	
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	0.0	0.0	
MINIMUM ≤ 32°	30	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	
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	285	221	214	134	69	39	0	0	15	24	145	284	1430
	NORMAL COOLING DEG. DAYS	30	0	5	13	35	63	144	255	295	237	120	34	0	1201
RH	NORMAL (PERCENT)	30	65	67	67	65	68	70	68	68	69	68	67	66	67
	HOUR 04 LST	30	74	77	78	79	80	82	82	81	82	80	78	77	79
	HOUR 10 LST	30	58	61	59	57	61	64	62	61	60	58	58	59	60
	HOUR 16 LST	30	51	52	53	50	54	55	52	53	54	53	53	52	53
	HOUR 22 LST	30	72	72	73	72	75	76	76	77	77	76	74	73	74
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	55	5.0	3.6	2.8	2.2	1.3	1.4	1.9	2.9	3.5	4.6	5.2	5.5	39.9
	THUNDERSTORMS	55	0.3	0.5	0.8	0.3	0.1	0.1	0.2	0.3	0.5	0.4	0.3	0.2	4.0
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	39	4.2	4.4	4.2	3.7	4.0	3.5	2.6	2.5	3.0	3.4	3.5	3.8	3.6
	MIDNIGHT-MIDNIGHT (OKTAS)	22	3.7	4.0	3.9	3.2	4.0	3.7	2.7	2.7	3.3	3.3	3.5	3.4	3.5
	MEAN NO. DAYS WITH:														
CLEAR	39	11.7	9.5	10.9	12.4	10.6	12.4	17.6	18.7	14.7	13.2	13.4	12.7	157.8	
PARTLY CLOUDY	39	8.2	7.6	9.5	10.1	12.5	11.9	10.7	10.1	10.9	11.1	8.2	8.4	119.2	
CLOUDY	39	11.1	11.2	10.6	7.5	7.9	5.7	2.0	1.6	4.5	6.7	8.3	9.9	87.0	
PR	MEAN STATION PRESSURE (IN)	17	30.03	30.01	29.96	29.90	29.90	29.88	29.88	29.88	29.86	29.93	29.99	30.03	29.94
	MEAN SEA-LEVEL PRES. (IN)	15	30.07	30.04	30.02	29.96	29.94	29.91	27.93	27.91	29.90	29.95	30.02	30.07	29.64
WINDS	MEAN SPEED (MPH)	22	4.8	5.5	6.0	6.5	6.6	6.5	6.4	6.1	5.7	5.2	4.9	4.6	5.7
	PREVAIL. DIR (TENS OF DEGS)	8	30	29	28	18	18	18	18	30	29	30	30	30	30
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	2	29	30	32	31	21	20	18	20	26	29	28	33	33
	DIR. (TENS OF DEGS)		02	12	22	30	13	27	28	27	10	29	22	31	31
	YEAR OF OCCURRENCE		1997	1998	1998	1997	1998	1997	1997	1997	1998	1997	1997	1998	DEC 1998
	MAXIMUM 5-SECOND:														
SPEED (MPH)	2	34	40	45	39	28	23	21	25	33	36	37	45	45	
DIR. (TENS OF DEGS)		02	11	18	31	15	28	27	17	10	27	22	32	32	
YEAR OF OCCURRENCE		1997	1998	1998	1997	1998	1997	1998	1998	1998	1997	1997	1998	DEC 1998	
PRECIPITATION	NORMAL (IN)	30	2.47	2.47	1.96	0.68	0.17	0.04	0.01	0.11	0.29	0.27	1.65	1.68	11.80
	MAXIMUM MONTHLY (IN)	54	12.76	12.09	8.75	4.42	2.32	0.86	0.21	2.03	1.45	2.08	6.05	5.98	12.76
	YEAR OF OCCURRENCE		1995	1998	1983	1965	1977	1993	1986	1977	1976	1941	1965	1941	JAN 1995
	MINIMUM MONTHLY (IN)	54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00
	YEAR OF OCCURRENCE		1976	1964	1959	1993	1952	1978	1983	1978	1974	1969	1980	1989	APR 1993
	MAXIMUM IN 24 HOURS (IN)	54	6.86	3.59	3.52	1.49	2.06	0.86	0.20	1.90	1.42	1.48	3.14	3.52	6.86
	YEAR OF OCCURRENCE		1956	1963	1983	1958	1977	1993	1986	1977	1986	1996	1967	1992	JAN 1956
NORMAL NO. DAYS WITH:															
PRECIPITATION ≥ 0.01	30	5.1	5.3	5.7	3.4	1.1	0.4	0.2	0.5	1.5	2.0	3.9	4.7	33.8	
PRECIPITATION ≥ 1.00	30	0.8	0.7	0.4	0.1	0.1	0.0	0.0	*	0.1	*	0.5	0.4	3.1	
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)	53	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
	YEAR OF OCCURRENCE		1993	1996											FEB 1996
	MAXIMUM IN 24 HOURS (IN)	52	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
	YEAR OF OCCURRENCE		1993	1996											FEB 1996
	MAXIMUM SNOW DEPTH (IN)	46	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 LONG BEACH, CA (LGB)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	11.24	6.07	0.66	0.48	0.03	T	0.05	T	0.02	0.00	1.41	0.06	20.02
1970	1.79	2.02	1.10	T	T	T	T	T	T	0.05	3.50	3.81	12.27
1971	0.58	0.66	0.23	0.62	0.67	T	T	0.00	T	0.57	0.22	5.29	8.84
1972	0.00	0.03	T	0.18	0.02	0.09	0.00	0.22	0.15	0.03	3.94	1.36	6.02
1973	3.39	4.98	2.45	T	T	T	T	T	T	0.21	2.04	0.36	13.43
1974	6.12	0.17	3.28	0.18	0.05	T	T	T	0.00	0.58	0.03	5.21	15.62
1975	0.09	4.44	3.60	1.49	0.01	T	T	0.00	T	0.25	0.13	0.21	10.22
1976	0.00	2.40	0.66	1.18	0.01	0.14	T	0.03	1.45	0.07	0.98	0.43	7.35
1977	1.80	0.35	1.35	T	2.32	T	0.00	2.03	0.02	T	T	3.03	10.90
1978	7.62	8.60	6.17	0.80	T	0.00	0.00	0.00	1.04	0.02	2.00	1.42	27.67
1979	8.41	2.25	4.07	T	T	T	T	T	T	0.37	0.23	0.28	15.61
1980	7.17	9.40	2.86	0.29	0.10	T	T	T	T	T	0.00	1.54	21.36
1981	1.85	1.55	3.41	0.32	T	T	0.00	T	0.07	0.59	2.39	0.98	11.16
1982	1.92	0.20	3.12	0.76	0.16	T	0.00	T	0.40	0.19	3.07	0.92	10.74
1983	3.04	4.17	8.75	2.30	0.18	0.01	0.00	0.57	1.31	1.44	2.93	1.99	26.69
1984	0.25	0.01	0.13	1.06	0.00	0.01	0.05	0.08	0.15	0.35	1.20	5.20	8.49
1985	0.91	1.58	0.61	T	0.21	0.00	T	0.00	0.24	0.14	4.21	0.33	8.23
1986	1.88	4.97	2.68	0.43	0.00	T	0.21	0.00	1.43	0.40	1.12	0.37	13.49
1987	1.88	1.39	0.63	0.06	T	0.10	0.05	0.05	0.02	1.63	0.64	1.79	8.24
1988	1.67	1.05	0.02	1.33	0.00	T	T	0.02	0.04	T	0.75	3.21	8.09
1989	0.37	0.87	0.80	0.01	0.02	T	0.00	T	0.34	0.45	0.14	T	3.00
1990	1.59	2.08	0.09	0.50	1.20	T	0.00	T	T	0.00	0.22	0.02	5.70
1991	1.42	3.41	4.87	0.05	T	T	0.13	0.01	0.02	0.14	0.05	2.06	12.16
1992	1.48	4.54	5.29	0.02	0.02	T	0.06	0.00	T	0.52	T	4.97	16.90
1993	9.12	5.51	2.00	0.00	T	0.86	T	0.00	T	0.04	0.88	0.78	19.19
1994	0.26	5.17	1.25	0.44	0.16	T	T	T	0.00	0.14	0.42	0.53	8.37
1995	12.76	0.52	5.15	0.45	0.02	0.51	0.06	0.00	T	T	0.02	1.98	21.47
1996	1.83	4.37	1.26	0.42	0.02	0.00	T	0.00	0.00	1.48	1.80	4.07	15.25
1997	6.18	0.13	0.00	0.00	T	T	T	0.00	0.47	T	2.48	3.70	12.96
1998	2.98	12.09	4.76	1.49	1.68	0.03	T	T	T	0.01	1.40	0.57	25.01
POR= 54 YRS	2.59	2.58	1.92	0.67	0.16	0.05	0.00	0.00	0.11	0.22	1.33	1.67	11.30

WBAN : 23129

AVERAGE TEMPERATURE (°F) 1998 LONG BEACH, CA (LGB)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	57.3	53.7	56.2	60.6	64.5	66.6	73.0	75.2	71.3	66.3	64.8	58.2	64.0
1970	55.9	59.3	59.6	59.9	66.0	69.0	73.8	75.2	72.2	66.2	60.9	54.5	64.4
1971	54.4	56.0	59.5	60.3	63.2	68.2	74.0	79.4	76.1	68.2	60.4	52.6	64.4
1972	53.5	56.4	59.5	63.0	66.8	70.7	74.4	73.9	72.3	66.1	59.1	54.0	64.1
1973	53.5	57.5	55.2	62.3	65.7	71.5	73.0	73.4	68.6	67.2	58.0	55.4	63.4
1974	53.4	55.7	57.2	62.0	64.7	70.4	73.9	73.3	72.2	66.7	63.2	54.1	63.9
1975	56.7	58.4	56.8	57.2	63.4	66.8	72.8	72.7	74.2	66.7	60.6	57.2	63.6
1976	60.1	59.3	59.9	59.6	66.3	72.0	73.6	74.2	74.3	72.3	66.2	59.0	66.4
1977	57.7	59.4	55.5	62.8	63.2	68.9	74.2	76.3	71.6	70.4	66.4	61.2	65.6
1978	56.2	56.9	64.0	61.4	68.9	69.9	72.6	73.0	74.2	69.7	58.4	52.6	64.8
1979	53.7	55.2	59.4	64.2	65.7	72.1	72.0	73.5	74.9	66.4	59.8	58.6	64.6
1980	58.5	60.9	58.0	62.6	62.5	68.9	74.1	74.4	70.3	67.9	61.7	59.2	64.9
1981	58.4	59.7	58.6	63.0	66.7	75.1	75.8	76.0	73.2	66.6	61.9	58.3	66.1
1982	53.8	58.7	58.0	61.5	64.9	65.5	73.3	75.9	74.0	69.4	60.5	55.7	64.3
1983	58.4	58.8	59.8	61.1	66.2	68.3	74.1	79.1	76.7	71.0	60.4	56.2	65.8
1984	57.8	58.0	61.5	62.3	68.0	69.3	76.7	76.6	79.2	66.0	57.7	54.0	65.6
1985	54.3	56.1	56.2	62.7	63.5	69.5	75.6	73.2	70.0	67.4	58.1	57.7	63.7
1986	60.8	58.4	60.3	62.4	65.1	69.0	71.4	74.5	67.6	66.7	63.1	57.2	64.7
1987	54.2	57.3	59.0	65.5	66.2	68.1	69.6	72.1	73.4	70.5	62.0	53.1	64.3
1988	56.1	60.6	63.3	63.4	66.2	66.9	73.3	73.1	71.1	68.4	60.4	56.0	64.9
1989	55.3	55.8	61.1	66.8	65.4	68.1	72.6	72.2	72.3	67.2	64.8	59.3	65.1
1990	56.8	55.5	59.3	64.2	66.0	71.7	75.8	73.4	73.6	70.3	63.1	55.5	65.4
1991	57.0	61.3	56.1	62.6	63.0	66.0	70.3	72.3	72.4	69.9	63.8	58.0	64.4
1992	57.3	60.4	59.3	67.2	68.1	69.4	74.8	77.5	74.5	68.9	62.9	54.5	66.2
1993	55.9	57.0	61.8	64.3	67.7	70.5	72.2	72.9	72.1	68.8	62.2	57.0	65.2
1994	58.5	56.4	61.2	62.4	63.8	71.6	72.2	77.4	73.8	67.6	56.9	56.6	64.9
1995	56.4	61.8	60.2	61.8	62.2	66.8	72.9	74.8	74.0	67.8	63.3	58.2	65.0
1996	57.2	58.4	59.5	65.5	67.2	70.1	73.2	75.0	71.8	64.8	61.3	56.8	65.1
1997	56.0	56.9	62.0	63.7	71.3	70.2	72.4	77.0	78.9	70.8	64.6	57.5	66.8
1998	56.8	56.6	61.3	62.3	65.5	70.2	76.1	80.1	74.3	67.8	60.2	56.5	65.6
POR= 55 YRS	55.3	56.6	58.2	61.3	64.3	67.8	72.3	73.4	71.7	67.3	61.1	55.5	63.7

HEATING DEGREE DAYS (base 65°F) 1998 LONG BEACH, CA (LGB)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0	0	0	23	56	213	274	155	163	151	32	1	1068
1970-71	0	0	0	21	124	317	332	251	185	146	72	9	1457
1971-72	0	0	1	62	138	379	354	241	164	62	33	0	1434
1972-73	0	0	0	31	169	334	352	203	295	77	29	0	1490
1973-74	0	0	1	9	207	292	354	257	234	96	37	0	1487
1974-75	0	0	0	27	87	331	254	180	246	227	63	2	1417
1975-76	0	0	0	28	145	239	177	161	165	165	8	1	1089
1976-77	0	0	0	0	42	180	224	157	285	74	72	1	1035
1977-78	0	0	0	4	35	125	265	223	88	104	12	5	861
1978-79	0	0	0	4	201	376	344	268	177	41	30	1	1442
1979-80	0	0	0	21	147	204	195	116	209	99	82	11	1084
1980-81	0	0	0	14	103	185	197	156	189	89	8	0	941
1981-82	0	0	0	26	111	198	339	173	211	119	33	10	1220
1982-83	0	0	0	7	136	283	203	170	161	119	24	1	1104
1983-84	0	0	0	0	145	268	220	198	109	101	15	0	1056
1984-85	0	0	0	32	213	333	324	253	266	87	57	5	1570
1985-86	0	0	0	17	205	219	132	191	154	98	31	0	1047
1986-87	0	0	14	11	64	233	330	214	182	50	23	0	1121
1987-88	0	0	0	4	106	365	270	133	112	85	28	14	1117
1988-89	0	0	0	0	136	277	299	264	134	37	24	3	1174
1989-90	0	0	1	11	49	173	244	261	179	39	22	0	979
1990-91	0	0	0	2	82	292	241	107	268	89	86	9	1176
1991-92	0	0	0	23	72	212	236	141	171	17	0	0	872
1992-93	0	0	0	0	79	319	280	217	103	44	3	6	1051
1993-94	0	0	0	3	90	243	195	234	123	90	52	0	1030
1994-95	0	0	0	7	238	255	263	115	148	108	85	19	1238
1995-96	0	0	0	5	55	204	242	191	169	53	10	0	929
1996-97	0	0	0	50	131	247	271	220	111	70	0	0	1100
1997-98	0	0	0	0	70	227	243	232	120	116	16	0	1024
1998-	0	0	0	7	139	263							

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COOLING DEGREE DAYS (base 65°F) 1998 LONG BEACH, CA (LGB)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	13	0	3	10	33	61	252	323	199	69	56	10	1029
1970	0	0	2	8	70	129	280	325	224	67	7	0	1112
1971	12	7	25	12	24	111	286	453	342	171	11	0	1454
1972	0	0	0	12	97	177	299	285	224	72	0	0	1166
1973	0	0	0	3	57	203	254	267	112	86	6	1	989
1974	0	0	0	15	31	167	284	262	220	87	40	0	1106
1975	6	0	0	0	22	62	248	243	282	90	18	3	974
1976	34	0	17	8	56	215	271	295	286	232	85	0	1499
1977	6	4	0	14	26	124	295	360	207	180	83	13	1312
1978	0	0	65	2	138	162	240	254	284	155	11	0	1311
1979	0	0	10	25	61	220	226	272	302	72	1	14	1203
1980	0	4	0	33	10	132	289	299	167	109	7	8	1058
1981	0	15	0	37	66	309	340	350	251	81	28	1	1478
1982	0	1	2	21	37	33	265	345	276	150	7	0	1137
1983	8	0	7	7	67	108	291	443	359	191	14	0	1495
1984	3	0	8	28	116	138	369	369	430	68	0	0	1529
1985	0	8	0	24	15	149	339	259	156	98	4	2	1054
1986	11	15	12	26	40	126	207	301	102	69	15	0	924
1987	1	4	2	71	67	97	151	225	262	185	22	0	1087
1988	3	12	65	43	70	79	264	259	186	111	3	6	1101
1989	3	12	19	98	43	102	243	229	225	85	49	6	1114
1990	0	1	11	21	60	207	343	266	265	174	32	5	1385
1991	0	9	0	23	31	45	170	232	229	182	46	0	967
1992	0	15	0	89	104	139	312	395	293	128	19	0	1494
1993	3	0	12	33	92	178	229	252	219	131	13	3	1165
1994	2	0	12	17	21	205	230	393	270	92	1	2	1245
1995	2	34	2	21	6	78	250	310	274	102	7	0	1086
1996	6	5	3	74	87	160	260	317	212	51	29	0	1204
1997	0	0	26	39	201	165	233	379	425	186	64	2	1720
1998	0	0	13	39	39	161	347	475	286	99	0	7	1466

SNOWFALL (inches) 1998 LONG BEACH, CA (LGB)

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	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	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	0.0	0.0	0.0	0.0	0.0	0.0
1990-91	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
1991-92	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
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
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	T	0.0	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	0.0	T
1996-97	0.0	0.0											
1997-98													
1998-													
POR= 52 YRS	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T

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REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1998
LONG BEACH,
CALIFORNIA (LGB)

The climate of the Long Beach Airport is considerably influenced by local topography. In fact, the topography plays a greater role in the climatic conditions at this station than the more general movements of pressure systems which dominate other sections of the country.

The Pacific Ocean, 4 miles south and 12 miles west, has a moderating effect on temperatures. The annual range of temperatures at the airport is much less than is experienced at stations further inland in the Los Angeles basin. Low coastal hills lie immediately between the station and the sea, the highest being Signal Hill, 1 5/8 miles southwest and 498 feet above sea level. The Palos Verdes Hills, 11 miles west-southwest of the station, slope upward to 1,480 feet above sea level. These natural barriers between the ocean and the station cause slightly greater ranges of high and low temperatures locally than at stations on the coast. During the winter months high temperatures are usually in the upper 60s, and lows in the 40s. In the summer highs are in the 70s and low 80s, and lows in the high 50s. Fortunately, high temperatures usually occur with low relative humidities, making infrequent heat waves tolerable for most people.

Precipitation is sparse during the summer months, with an average of only about 0.60 inch for the months of May through October. The greatest rainfall occurs during the winter months. Terrain again plays an important role. Precipitation at the station is considerably less than over the San Gabriel Mountains, about 28 miles to the north and the Santa Ana Mountains, 20 miles to the east. Even the coastal hills influence the local precipitation with greater amounts of rainfall occurring just 1 or 2 miles south and southwest of the station. Snow is an extremely rare phenomenon locally, although the San Gabriel Mountains are blanketed in the higher elevations much of the winter, and occasionally have snow down to the 2,500-foot level. Thunderstorms occur only sporadically at Long Beach.

With the Pacific Ocean only 4 miles south, it might be expected that the sea breeze would be from a southerly component. However, the coastal hills to the southwest combine with the lowest mountain passes leading to the interior desert valleys east of the Los Angeles basin to produce a sea breeze from a westerly component in the afternoon and early evening hours. Occasionally, strong dry northeasterly winds descend the mountain slopes in the fall, winter, and early spring months, developing velocities in excess of 50 mph over localized sections of the Los Angeles basin, usually below canyons. However, these strong winds ordinarily by-pass the station. Actually, the highest winds at Long Beach are recorded in association with the winter and spring storms which invade southern California from the Pacific.

During the summer months low clouds are quite common in the late night and morning hours at this station due to its proximity to the ocean. The tourist from the east and midwest usually expects a wet, rainy day, but by late morning or early afternoon the clouds have disappeared and the balance of the day is sunny and comfortable. Here again is a moderating influence on summertime temperatures locally which is not so prominent at stations further inland where the coastal cloudiness arrives later, burns off earlier, and penetrates less frequently.

