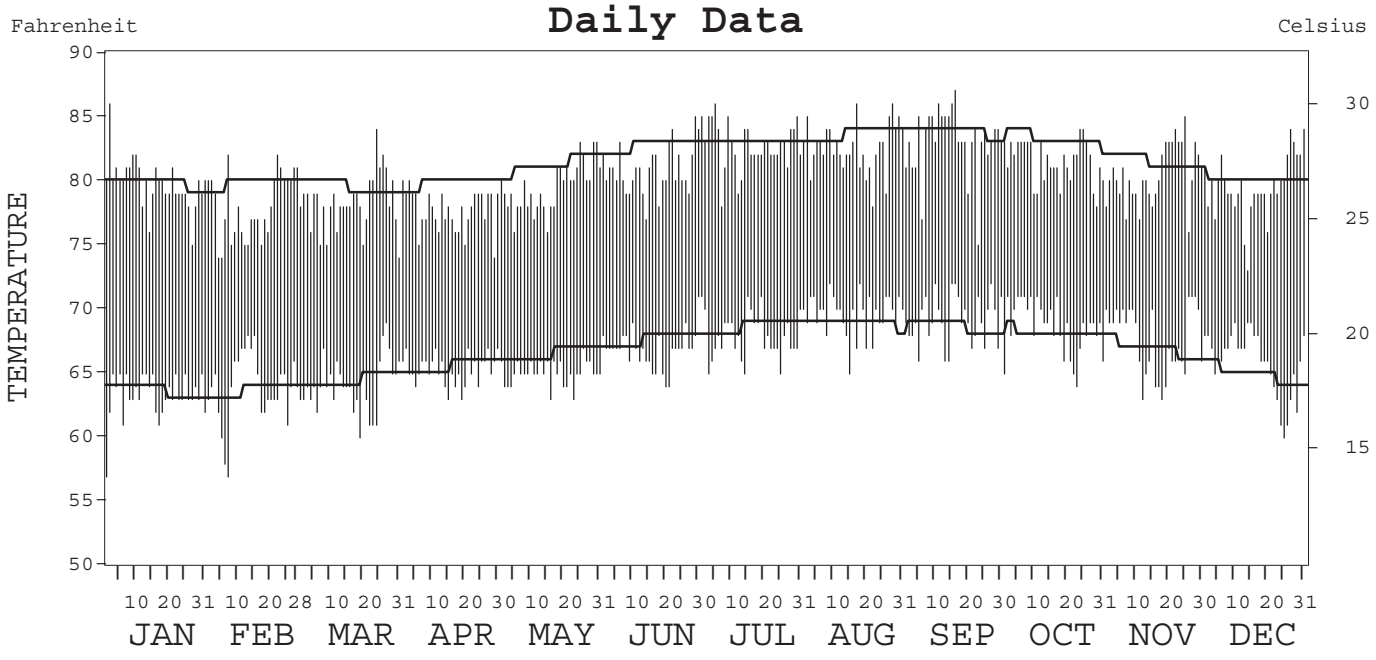
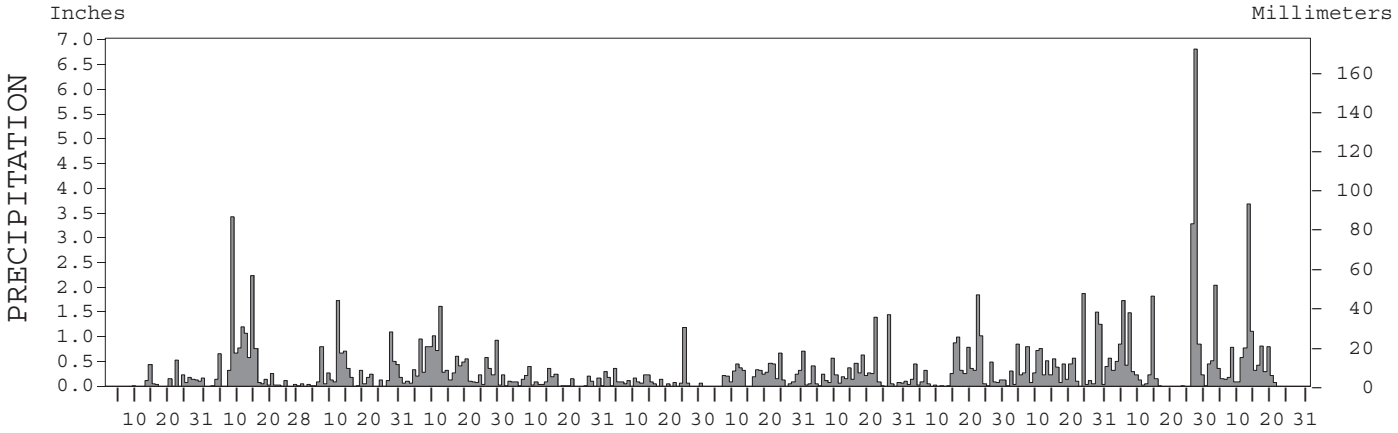
2001 LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

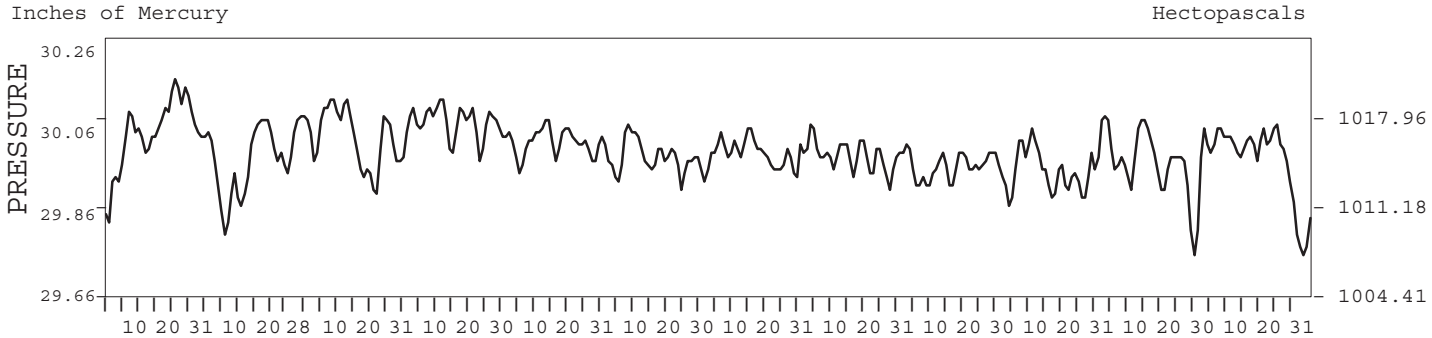
ISSN 0198-1684

HILO,
HAWAII (ITO)

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 2001

HILO, HI (ITO)

LATITUDE: 19° 43′ 24″ N LONGITUDE: 155° 03′ 05″ W ELEVATION (FT): GRND: 44 BARO: 47 TIME ZONE: HAWAII (UTC + 10) WBAN: 21504

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	79.8	78.0	78.3	77.7	79.5	80.8	82.8	82.6	83.1	81.5	80.5	79.5	80.3
	HIGHEST DAILY MAXIMUM	86	82	84	80	83	85	86	86	87	84	85	84	87
	DATE OF OCCURRENCE	02	22+	24	03+	30+	29	05	28+	16	25+	25	31+	SEP 16
	MEAN DAILY MINIMUM	63.3	63.9	64.1	65.3	65.1	66.9	67.9	69.6	69.2	68.6	67.5	65.9	66.4
	LOWEST DAILY MINIMUM	57	57	60	63	63	64	65	65	66	64	63	60	57
	DATE OF OCCURRENCE	01	07	19	19+	23+	21+	25+	15	14+	23	18+	25	FEB 07
	AVERAGE DRY BULB	71.6	71.0	71.2	71.5	72.3	73.9	75.4	76.1	76.2	75.1	74.0	72.7	73.4
	MEAN WET BULB		66.0	66.2	67.1	67.6	69.4	70.7	72.0	71.2	70.6	69.9	67.9	
	MEAN DEW POINT		63.6	63.4	65.2	65.3	67.0	68.6	70.2	68.8	68.6	67.8	65.7	
	NUMBER OF DAYS WITH:													
	MAXIMUM ≥ 90°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM ≤ 32°	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
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	0	0	0	0	0	0	0	0	0	0	0	0	0
	COOLING DEGREE DAYS	209	174	201	204	234	276	330	350	341	319	278	246	3162
RH	MEAN (PERCENT)	76	80	79	84	81	81	82	85	81	83	83	82	81
	HOUR 02 LST	81	87	87	92	89	89	91	92	86	88	88	87	88
	HOUR 08 LST	78	84	80	87	82	82	84	85	82	84	82	83	83
	HOUR 14 LST	62	69	68	72	68	70	68	75	70	73	73	72	70
	HOUR 20 LST	85	83	84	88	86	84	87	87	84	85	88	88	86
S	PERCENT POSSIBLE SUNSHINE	53	30	39	26	47	37	49	35	44	33	31	40	39
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY ≤ 1/4 MI)	0	0	0	0	0	0	0	0	0	1	1	0	2
	THUNDERSTORMS	0	2	0	0	0	0	0	0	1	1	2	1	7
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.)	30.06	29.99	30.05	30.08	30.04	30.00	30.01	30.00	29.97	29.98	29.98	29.99	30.01
	MEAN SEA-LEVEL PRESS. (IN.)	30.10	30.03	30.09	30.12	30.07	30.03	30.04	30.04	30.01	30.01	30.01	30.02	30.05
WINDS	RESULTANT SPEED (MPH)	2.1	0.7	0.9	0.7	0.4	1.1	1.3	0.6	0.5	1.1	1.5	0.4	0.1
	RES. DIR. (TENS OF DEGS.)	19	15	15	05	09	03	31	35	33	30	18	17	19
	MEAN SPEED (MPH)	6.5	7.0	6.7	6.7	6.6	6.6	6.8	6.4	6.3	6.8	5.8	5.3	6.5
	PREVAIL.DIR.(TENS OF DEGS.)	22	22	23	23	23	22	23	23	22	22	23	22	23
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)	26	25	26	23	20	24	20	21	21	24	21	25	26
	DIR. (TENS OF DEGS.)	09	06	08	08	08	06	08	07	11	02	14	07	08
	DATE OF OCCURRENCE	22	14	24	19+	09	20	30+	29	15	27	25	13+	MAR 24
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	31	31	29	32	22	28	22	23	23	31	26	32	32
	DIR. (TENS OF DEGS.)	10	05	08	08	08	06	02	07	12	03	14	08	08
	DATE OF OCCURRENCE	22	14	24	11	13+	20	31+	29+	15	27	25	13	DEC 13
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	2.28	12.47	8.35	12.56	2.94	3.64	6.54	7.90	9.01	13.16	19.89	13.77	112.51
	GREATEST 24-HOUR (IN.)	0.52	3.71	2.12	1.65	0.40	1.23	0.79	1.45	2.60	1.89	7.27	3.84	7.27
	DATE OF OCCURRENCE	22	07-08	12-13	12-13	08-09	24-25	30-31	26-27	22-23	24-25	27-28	13-14	NOV 27-28
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	14	22	26	30	26	22	22	29	27	30	22	21	291
	PRECIPITATION ≥ 0.10	10	14	17	24	12	9	19	18	16	23	17	18	197
	PRECIPITATION ≥ 1.00	0	4	2	2	0	1	0	2	2	3	5	3	24
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

HILO, HI (ITO)

LATITUDE: 19° 43′ 24″ N LONGITUDE: 155° 03′ 05″ W ELEVATION (FT): GRND: 44 BARO: 47 TIME ZONE: HAWAII (UTC + 10) WBAN: 21504

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	79.8	79.8	79.5	79.8	81.2	82.7	83.0	83.6	83.8	83.2	81.4	80.0	81.5
	MEAN DAILY MAXIMUM	52	79.4	79.2	79.2	79.7	80.8	82.4	82.8	83.4	83.6	83.0	80.9	79.5	81.2
	HIGHEST DAILY MAXIMUM	55	92	92	93	89	94	90	89	93	92	91	92	93	94
	YEAR OF OCCURRENCE		1997	1968	1972	1978	1966	1969	1995	1950	1951	1979	1996	1980	MAY 1966
	MEAN OF EXTREME MAXS.	52	85.5	85.1	84.4	83.7	84.6	85.5	85.9	86.8	86.8	87.2	85.5	84.5	85.5
	NORMAL DAILY MINIMUM	30	63.6	63.6	64.4	65.5	66.5	67.6	68.6	68.9	68.6	68.1	66.8	64.8	66.4
	MEAN DAILY MINIMUM	52	63.5	63.3	64.2	65.3	66.4	67.6	68.6	69.0	68.5	67.9	66.7	64.6	66.3
	LOWEST DAILY MINIMUM	55	54	53	54	56	58	60	62	63	61	62	58	55	53
	YEAR OF OCCURRENCE		1995	1962	1983	1949	1947	1946	1970	1955	1970	1999	1985	1977	FEB 1962
	MEAN OF EXTREME MINS.	52	58.6	58.0	59.6	61.6	62.6	64.3	65.0	65.3	64.9	64.1	62.4	59.5	62.2
	NORMAL DRY BULB	30	71.7	71.7	72.0	72.7	73.9	75.2	75.8	76.3	76.2	75.7	74.2	72.4	74.0
	MEAN DRY BULB	52	71.4	71.3	71.7	72.4	73.7	75.0	75.7	76.2	76.1	75.4	73.8	72.1	73.7
	MEAN WET BULB	17	66.0	65.7	66.6	67.5	68.7	70.0	71.2	71.8	71.4	70.8	69.8	67.2	68.9
	MEAN DEW POINT	17	63.1	62.6	63.5	64.8	66.1	67.5	68.9	69.5	69.1	68.5	67.7	64.7	66.3
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.1	0.1	*	0.0	0.1	*	0.0	0.1	0.2	0.3	*	0.1	1.0
	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	0.0	0.0
	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	0	0	0	0	0	0	0	0	0	0	0	0	0
	NORMAL COOLING DEG. DAYS	30	208	188	217	231	276	306	335	350	336	332	276	229	3284
RH	NORMAL (PERCENT)	30	77	76	78	80	79	77	80	80	79	80	80	79	79
	HOUR 02 LST	30	83	83	85	88	87	86	88	87	87	87	86	85	86
	HOUR 08 LST	30	78	77	80	81	79	78	81	80	79	79	81	80	79
	HOUR 14 LST	30	66	65	67	70	67	65	68	68	69	70	70	68	68
	HOUR 20 LST	30	82	81	82	83	82	81	82	82	84	85	85	84	83
S	PERCENT POSSIBLE SUNSHINE	49	46	46	42	37	37	44	41	41	43	38	33	37	40
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
	THUNDERSTORMS	56	0.9	1.3	1.5	1.0	0.6	0.1	0.3	0.3	0.5	1.1	1.2	0.9	9.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	51	5.0	5.3	6.0	6.4	6.2	5.9	6.1	5.9	5.6	5.7	5.9	5.5	5.8
	MIDNIGHT-MIDNIGHT (OKTAS)	33	5.0	5.2	5.9	6.4	6.2	6.1	6.3	5.9	5.6	5.8	6.0	5.5	5.8
	MEAN NO. DAYS WITH:														
	CLEAR	51	6.5	5.3	2.7	1.2	1.2	1.7	1.3	1.8	2.9	2.7	3.2	5.0	35.5
	PARTLY CLOUDY	51	11.4	10.3	10.2	9.2	10.6	11.3	11.5	12.2	12.0	11.8	10.0	10.8	131.3
	CLOUDY	51	13.1	12.7	18.0	19.7	19.1	17.1	17.7	16.5	14.5	16.1	16.2	14.6	195.3
PR	MEAN STATION PRESSURE(IN)	29	29.96	29.98	30.02	30.02	30.02	30.01	29.99	29.97	29.94	29.95	29.96	29.97	29.98
	MEAN SEA-LEVEL PRES. (IN)	18	30.02	30.03	30.05	30.07	30.05	30.05	30.02	30.00	29.97	29.98	30.00	30.02	30.02
WINDS	MEAN SPEED (MPH)	35	7.6	7.9	8.0	7.8	7.6	7.3	7.2	7.2	7.1	7.0	7.0	7.3	7.4
	PREVAIL.DIR(TENS OF DEGS)	22	22	22	22	22	22	23	23	23	22	22	22	22	22
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	29	31	26	23	23	24	21	24	22	24	24	25	31
	DIR. (TENS OF DEGS)		01	35	08	08	08	06	07	10	08	02	04	07	35
	YEAR OF OCCURRENCE		1998	1998	2001	2001	1999	2001	2000	1998	1998	2001	1999	2001	FEB 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	4	35	38	29	32	29	28	25	32	25	31	29	32	38
	DIR. (TENS OF DEGS)		36	34	08	08	11	06	08	10	08	03	04	08	34
	YEAR OF OCCURRENCE		1998	1998	2001	2001	1999	2001	1998	1998	1998	2001	1999	2001	FEB 1998
PRECIPITATION	NORMAL (IN)	30	9.88	10.29	13.92	15.26	9.91	6.20	9.71	9.34	8.53	9.60	14.51	12.04	129.19
	MAXIMUM MONTHLY (IN)	59	32.24	45.55	49.93	43.24	25.01	22.70	28.59	26.92	21.82	26.10	45.90	50.82	50.82
	YEAR OF OCCURRENCE		1979	1979	1980	1986	1964	1997	1982	1991	1994	1951	2000	1954	DEC 1954
	MINIMUM MONTHLY (IN)	59	0.13	0.52	0.88	2.93	1.18	1.80	3.54	2.66	1.59	2.40	1.01	0.28	0.13
	YEAR OF OCCURRENCE		1998	2000	1972	1962	1945	1985	1999	1971	1974	1962	1989	1980	JAN 1998
	MAXIMUM IN 24 HOURS (IN)	59	10.90	22.30	17.05	11.07	10.26	4.72	7.11	11.57	9.49	8.88	27.36	11.45	27.36
	YEAR OF OCCURRENCE		1990	1979	1980	1971	1965	1997	1982	1991	1994	1951	2000	1987	NOV 2000
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	16.4	16.6	23.1	25.1	25.5	24.3	27.2	25.9	23.4	23.6	22.4	19.8	273.3
	PRECIPITATION ≥ 1.00	30	2.6	2.6	3.7	3.7	2.2	1.0	1.7	1.4	2.2	2.2	3.9	3.1	30.3
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)	1	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
	YEAR OF OCCURRENCE														
	MAXIMUM IN 24 HOURS (IN)	55	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
	YEAR OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN)	47	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) 2001 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1972	10.96	10.13	0.88	17.79	4.71	4.58	9.07	8.77	5.20	9.52	13.23	4.01	98.85
1973	3.45	5.51	18.84	7.34	8.34	3.69	4.40	3.54	8.07	9.72	26.88	8.19	107.97
1974	5.88	7.57	13.47	19.11	8.07	4.76	7.81	4.25	1.59	6.65	14.56	19.20	112.92
1975	19.62	9.28	10.40	10.23	3.01	4.20	3.83	8.13	2.73	8.88	11.15	8.47	99.93
1976	15.62	11.63	25.00	11.58	6.01	2.97	5.46	5.13	5.31	11.35	7.24	7.37	114.67
1977	1.22	9.56	15.49	10.90	10.86	2.46	6.36	7.60	4.19	10.30	8.78	2.66	90.38
1978	5.41	4.26	12.95	6.53	9.64	10.99	11.19	13.53	5.44	10.12	20.21	8.82	119.09
1979	32.24	45.55	5.32	9.90	4.10	10.45	6.54	7.04	3.64	5.03	21.56	7.40	158.77
1980	0.91	4.14	49.93	11.01	5.88	9.66	9.17	8.24	13.70	7.69	7.13	0.28	127.74
1981	1.51	4.95	5.66	4.63	4.16	2.43	4.32	8.97	12.79	10.23	11.73	18.53	89.91
1982	13.58	1.35	48.50	12.00	6.89	6.03	28.59	25.45	9.92	6.53	4.74	6.78	170.36
1983	0.90	0.83	1.98	10.31	9.60	3.94	7.21	7.48	12.08	8.06	2.33	3.37	68.09
1984	10.76	10.06	3.37	12.08	6.59	4.28	6.63	9.36	4.05	2.52	18.38	12.00	100.08
1985	2.25	16.14	21.28	10.61	17.04	1.80	9.86	6.71	11.78	8.19	4.71	2.59	112.96
1986	4.95	0.58	15.37	43.24	8.61	9.11	11.17	10.64	14.36	11.53	35.72	5.75	171.03
1987	9.02	5.06	4.79	9.24	15.65	12.91	18.26	3.69	11.56	14.21	15.83	22.19	142.41
1988	10.31	9.95	13.09	12.90	7.77	5.11	5.50	16.56	11.30	8.50	25.74	13.46	140.19
1989	27.46	6.54	7.33	37.19	19.80	7.03	22.93	8.82	9.73	13.16	1.01	5.71	166.71
1990	29.13	15.24	10.80	4.02	8.13	10.04	10.78	7.80	18.47	20.96	45.75	30.10	211.22
1991	3.81	9.32	37.88	11.02	8.08	9.85	9.82	26.92	9.41	5.15	6.74	15.04	153.04
1992	1.33	1.29	3.90	6.62	2.99	9.36	17.63	13.62	17.59	3.38	25.16	17.02	119.89
1993	2.17	2.67	11.96	9.04	7.54	6.63	18.43	11.38	4.99	12.83	10.74	16.11	114.49
1994	10.39	25.52	18.48	8.59	7.18	13.29	11.71	14.58	21.82	8.73	35.91	6.61	182.81
1995	4.52	1.56	4.17	8.14	8.68	5.35	15.13	13.93	4.20	7.62	8.52	4.10	85.92
1996	14.29	11.81	16.66	6.27	3.65	10.33	13.22	4.77	7.03	11.07	14.22	6.89	120.21
1997	2.33	7.84	19.25	6.03	10.75	22.70	19.38	4.75	8.98	12.64	8.86	8.10	131.61
1998	0.13	2.40	3.67	8.86	15.65	11.27	6.09	8.48	10.76	16.01	15.57	9.89	108.78
1999	16.68	19.34	12.13	16.04	2.84	4.66	3.54	10.14	5.65	3.61	7.74	14.41	116.78
2000	17.87	0.52	5.81	7.25	3.36	8.19	13.16	10.54	9.20	17.65	45.90	4.59	144.04
2001	2.28	12.47	8.35	12.56	2.94	3.64	6.54	7.90	9.01	13.16	19.89	13.77	112.51
POR= 59 YRS	9.48	11.18	13.46	12.75	8.84	6.89	10.13	10.15	8.15	10.07	15.38	13.20	129.68

WBAN : 21504

AVERAGE TEMPERATURE (°F) 2001 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1972	70.1	70.7	73.8	72.7	73.0	75.3	75.4	76.5	76.4	76.0	73.3	71.4	73.7
1973	72.2	71.1	72.5	72.2	72.9	74.6	75.7	76.3	76.3	75.8	75.4	73.8	74.1
1974	74.5	72.6	73.1	73.5	73.8	75.3	76.1	76.9	77.3	76.9	73.6	72.3	74.7
1975	71.0	71.9	71.2	72.4	73.1	74.4	74.8	75.7	75.5	74.7	73.5	72.2	73.4
1976	71.3	71.2	71.6	72.1	73.0	73.6	74.5	76.2	76.9	76.2	74.5	73.2	73.7
1977	73.9	74.0	73.3	74.2	74.7	76.2	77.1	78.1	77.5	76.9	75.2	73.7	75.4
1978	71.7	72.0	73.2	74.2	76.2	76.5	77.1	76.8	76.2	75.5	74.1	71.1	74.6
1979	69.8	70.4	71.5	73.8	73.8	74.2	74.6	75.6	76.5	76.1	73.0	72.8	73.5
1980	71.6	72.6	72.3	74.5	77.3	77.6	77.8	75.0	75.7	74.8	73.8	74.2	74.8
1981	73.5	72.7	71.6	72.8	74.2	76.0	76.1	76.1	76.2	74.6	73.9	72.0	74.1
1982	71.9	71.8	70.3	71.2	72.9	76.3	76.7	76.9	76.1	74.9	74.6	71.8	73.8
1983	71.4	71.9	72.5	71.9	72.6	74.3	74.8	75.2	74.9	74.1	73.8	72.9	73.4
1984	72.4	71.5	73.8	73.0	74.0	74.7	75.2	75.3	75.4	76.5	73.6	71.1	73.9
1985	69.8	70.5	69.4	69.8	71.4	74.4	75.4	75.7	75.7	74.3	73.0	71.6	72.6
1986	71.1	73.6	74.7	73.6	75.4	76.6	77.8	78.5	77.9	76.4	75.1	72.8	75.3
1987	71.8	70.7	71.6	72.2	72.5	75.4	76.7	77.9	77.8	76.6	74.7	73.1	74.3
1988	71.9	72.3	72.2	72.6	74.2	74.7	75.7	76.0	76.6	77.9	76.3	74.9	74.6
1989	72.2	71.4	72.4	71.1	72.7	74.7	75.2	75.0	74.6	75.6	73.6	71.3	73.3
1990	72.1	70.4	71.2	73.5	74.1	75.0	76.0	77.0	77.2	76.2	75.4	72.5	74.2
1991	72.0	72.8	70.8	72.6	74.2	74.8	76.0	76.9	76.9	76.2	75.8	72.9	74.3
1992	71.2	71.4	72.3	72.4	74.8	76.2	76.2	77.2	77.8	77.7	75.2	73.6	74.7
1993	71.1	70.1	71.6	73.5	73.3	75.4	75.8	77.0	77.1	76.0	73.4	71.7	73.8
1994	70.0	71.3	71.7	73.4	74.9	76.0	78.1	78.6	78.1	77.4	74.9	73.0	74.8
1995	72.6	72.9	74.8	74.1	75.5	76.9	77.9	77.7	78.2	76.2	75.6	74.6	75.6
1996	73.4	70.9	71.5	74.4	76.1	76.9	77.5	77.5	77.5	77.3	75.8	73.2	75.2
1997	73.1	72.7	73.3	74.0	75.0	76.7	77.4	78.0	77.7	76.8	74.3	72.4	75.1
1998	71.8	71.7	72.9	71.8	72.2	73.8	74.8	76.1	74.5	74.2	72.4	69.9	73.0
1999	69.7	69.0	70.5	71.1	72.9	73.4	74.3	74.3	74.0	74.0	72.4	71.3	72.2
2000	69.1	71.3	71.8	71.3	73.9	75.5	75.5	76.1	75.4	75.3	73.0	71.7	73.3
2001	71.6	71.0	71.2	71.5	72.3	73.9	75.4	76.1	76.2	75.1	74.0	72.7	73.4
POR= 55 YRS	71.3	71.2	71.5	72.3	73.5	74.9	75.5	76.1	75.9	75.4	73.8	72.0	73.6

HEATING DEGREE DAYS (base 65°F) 2001 HILO, HI (ITO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1983-84	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
1985-86	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
1987-88	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
1989-90	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
1991-92	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
1993-94	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
1995-96	0	0	0	0	0	0	0	0	0	0	0	0	0
1996-97	0	0	0	0	0	0	0	0	0	0	0	0	0
1997-98	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
1999-00	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-01	0	0	0	0	0	0	0	0	0	0	0	0	0
2001-	0	0	0	0	0	0							

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COOLING DEGREE DAYS (base 65°F) 2001 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1972	163	171	281	236	256	316	330	365	349	348	256	207	3278
1973	233	180	239	222	253	294	341	358	345	340	321	278	3404
1974	299	219	261	263	276	315	351	375	375	376	262	235	3607
1975	192	201	197	232	257	288	311	339	323	309	262	233	3144
1976	201	186	214	222	255	268	302	355	364	357	291	261	3276
1977	280	260	264	281	307	343	379	415	382	374	312	274	3871
1978	216	215	263	283	353	351	383	375	341	332	279	195	3586
1979	155	160	210	271	278	280	302	338	351	350	246	248	3189
1980	213	227	234	293	390	385	405	316	328	313	269	295	3668
1981	271	220	210	242	293	338	350	348	345	302	274	225	3418
1982	220	196	170	194	252	348	369	379	340	317	293	219	3297
1983	207	200	239	214	240	287	313	324	303	288	272	250	3137
1984	236	194	282	247	284	298	324	326	320	363	261	195	3330
1985	154	161	142	152	204	290	329	339	329	294	248	211	2853
1986	196	246	308	264	329	356	404	423	396	363	309	250	3844
1987	218	163	212	226	241	319	369	407	389	365	299	259	3467
1988	221	216	233	238	293	298	338	349	353	405	345	315	3604
1989	227	188	238	189	248	297	327	315	294	335	264	202	3124
1990	227	157	200	260	290	308	349	379	376	353	317	237	3453
1991	223	222	188	234	296	301	348	378	365	351	333	251	3490
1992	197	192	235	229	312	343	355	384	387	402	315	275	3626
1993	193	148	213	263	263	318	343	380	370	350	260	217	3318
1994	161	183	214	261	312	338	412	427	401	389	305	254	3657
1995	241	228	310	281	335	364	410	402	401	355	325	303	3955
1996	266	178	209	291	349	360	396	394	379	387	331	265	3805
1997	261	221	261	277	317	358	388	407	389	373	287	239	3778
1998	216	194	253	211	230	269	311	351	293	289	228	162	3007
1999	149	117	179	189	252	257	292	296	278	284	228	200	2721
2000	133	191	221	194	280	322	332	350	317	328	247	213	3128
2001	209	174	201	204	234	276	330	350	341	319	278	246	3162

SNOWFALL (inches) 2001 HILO, HI (ITO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	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	0.0	0.0	0.0	0.0	0.0
1995-96	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
1996-97	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
1997-98	0.0	0.0	0.0	0.0	0.0	0.0							
1998-99													
1999-00													
2000-01													
2001-													
POR= 54 YRS	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

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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.

2001
HILO,
HAWAII (ITO)

The city of Hilo is located near the midpoint of the eastern shore of the Island of Hawaii. This island is by far the largest of the Hawaiian group, with an area of 4,038 square miles, more than twice that of all the other islands combined. Its topography is dominated by the great volcanic masses of Mauna Loa (13,653 feet), Mauna Kea (13,796 feet), and of Haulalai, the Kohala Mountains, and Kilauea. In fact, the island consists entirely of the slopes of these mountains and of the broad saddles between them. Mauna Loa and Kilauea, which occupy the southern half of the island, are still active volcanoes.

Hawaii lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high pressure cell to the north and east. The climate provides equable temperatures from day to day and season to season. In Hilo, July and August are the warmest months, with average daily highs and lows of 83 and 68 degrees. January and February, the coolest months, have highs of 80 degrees and lows of 63 degrees. Greater variations occur in localities with less rain and cloud, but temperatures in the mid-90s and low 50s are uncommon anywhere on the island near sea level.

Over the windward slopes of Hawaii , rainfall occurs principally as orographic showers within the ascending moist trade winds. Mean annual rainfall, except for the semi-sheltered Hamakua district, increases from 100 inches or more along the coasts to a maximum of over 300 inches at elevations of 2,000 to 3,000 feet, and then declines to about 15 inches at the summits of Mauna Kea and Mauna Loa. Leeward areas are topographically sheltered from the trades and are therefore drier, although sea breezes created by daytime heating of the land move onshore and upslope, causing afternoon and evening cloudiness and showers. The driest locality on the island, and in the State, with an annual rainfall of less than 10 inches, is the coastal strip just leeward of the southern portion of the Kohala Mountains and of the saddle between the Kohalas and Mauna Kea.

Within the city of Hilo, average rainfall varies from about 130 inches a year near the shore to as much as 200 upslope. The wettest part of the island, with a mean annual rainfall exceeding 300 inches, lies about 6 miles upslope from the city limits. Relative humidity at Hilo is in the moderate range, however, due to the natural ventilation provided by the prevailing winds, the weather is seldom oppressive.

The trade winds prevail throughout the year and profoundly influence the climate. The islands entire western coast is sheltered from the trades by high mountains, except that unusually strong trade winds may sweep through the saddle between the Kohala Mountains and Mauna Kea and reach the areas to the lee. But even places exposed to the trades may be affected by local mountain circulations. Except for heavy rain, really severe weather seldom occurs. During the winter, cold fronts or the cyclonic storms of subtropical origin may bring blizzards to the upper slopes of Mauna Loa and Mauna Kea, with snow extending at times to 9,000 feet or below and icing nearer the summit.

Storms crossing the Pacific a thousand miles to the north, low pressure or tropical storms, may generate seas that cause heavy swell and surf.

STATION LOCATION

HILO, HAWAII

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 INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
*NOTE:																
AIRPORT																
Administration Building General Lyman Field	2/2/54	01/01/98	1/4 mi. SSW	19°43′	155°04′	c27	a21 h21	7 f18 g4	7 f18 g4	%21	d4 f17	e4	4 f17	b4 h4		a. 57 feet to 6/11/66. b. Commissioned 7400 feet NE of thermometer site 7/1/66. c. 31 feet to 7/1/66. d. Commissioned 6/1/67. e. Decommissioned 6/1/67. f. Relocated to roof 7/1/69. g. Effective 12/31/72, removed September 1974. %. Commissioned 5/16/79. h. Moved 25′ S 3/13/81.
Hilo International AP	01/01/98	Present	NA	19°43′	155°03′	i44									S	ASOS Commissioned 01/01/98. i. Ground elevation.

* TYPE

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

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*** NOTES: For earlier station history see previous editions.**