

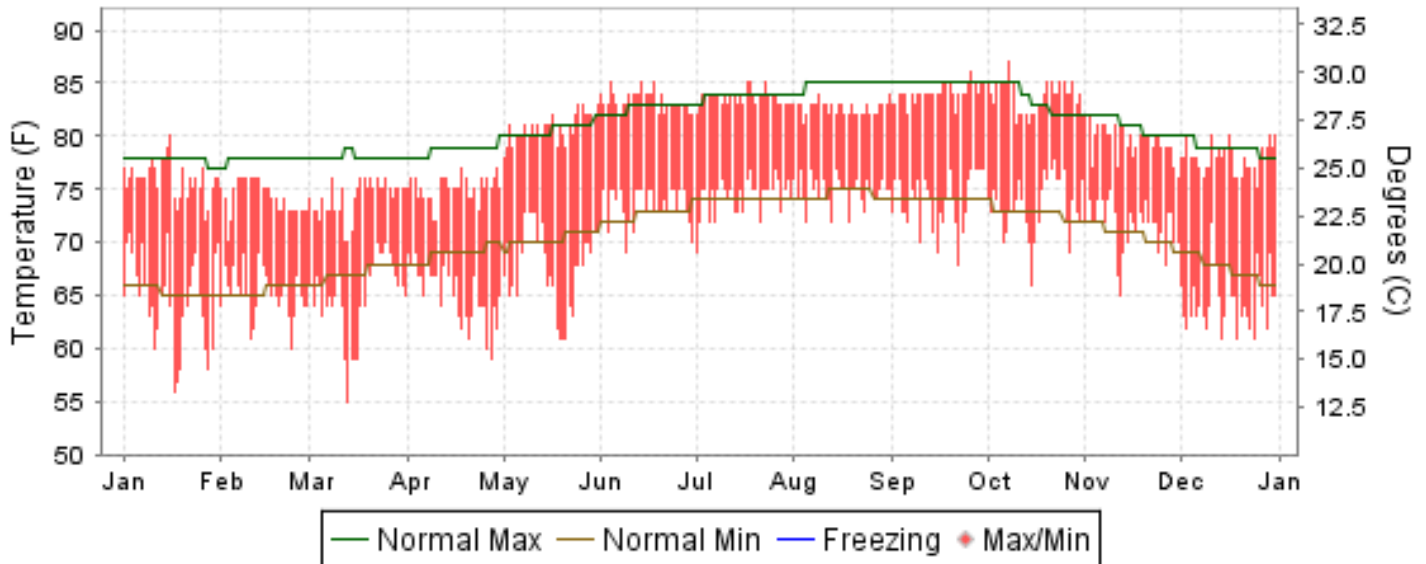


2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

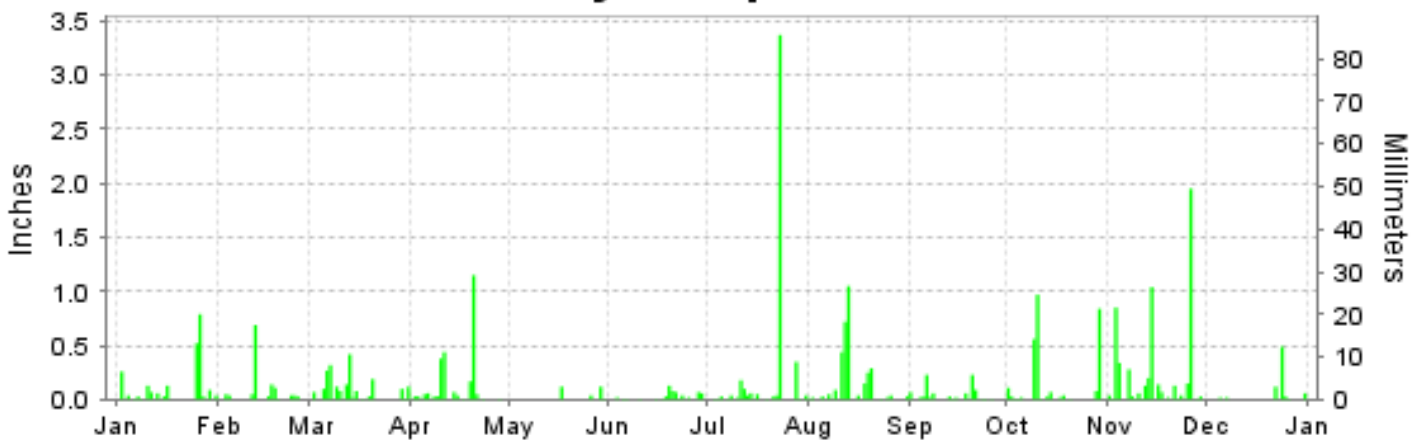
ISSN 0198-1749

LIHUE, HAWAII (PHLI)

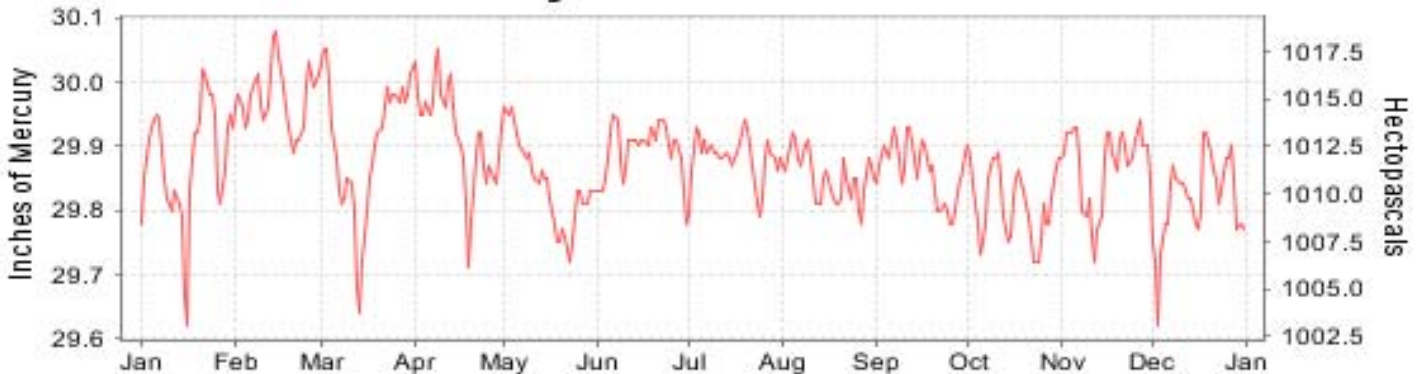
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL
ENVIRONMENTAL SATELLITE, DATA
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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2009

LIHUE (PHLI)

LATITUDE: 21° 58'N LONGITUDE: -159° 20'W ELEVATION (FT): GRND: 104 BARO: 104 TIME ZONE: HAWAII (UTC -10) WBAN: 22536

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	75.9	74.2	74.1	75.0	80.8	83.4	83.7	82.6	84.1	83.7	79.6	78.0	79.6	
	HIGHEST DAILY MAXIMUM	80	76	76	77	83	85	85	84	86	87	82	80	87	
	DATE OF OCCURRENCE	16	13+	25+	29+	31+	18+	23+	31+	26	08	02+	31+	OCT 08	
	MEAN DAILY MINIMUM	64.6	65.1	65.0	65.2	67.8	73.5	74.4	74.8	73.9	73.5	71.6	64.5	69.5	
	LOWEST DAILY MINIMUM	56	60	55	59	61	69	69	72	68	66	65	61	55	
	DATE OF OCCURRENCE	17	23	13	27	21+	09	01	18+	22	15	12	24+	MAR 13	
	AVERAGE DRY BULB	70.3	69.7	69.6	70.1	74.3	78.5	79.1	78.7	79.0	78.6	75.6	71.3	74.6	
	MEAN WET BULB	65.6	64.5	65.2	65.3	68.4	71.3	72.1	72.6	72.2	72.8	70.0	66.0	68.8	
	MEAN DEW POINT	62.7	60.9	62.7	62.5	65.5	68.1	68.7	69.6	68.9	70.1	67.0	63.0	65.8	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	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	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	0	0	2	0	0	0	0	0	0	0	0	0	2	
	COOLING DEGREE DAYS	170	139	150	159	296	408	445	433	428	428	324	201	3581	
RH	MEAN (PERCENT)	78	75	80	79	76	72	73	75	73	77	75	76	76	
	HOUR 02 LST	82	78	85	83	84	78	78	79	77	82	79	82	81	
	HOUR 08 LST	80	74	79	76	70	69	70	74	70	75	74	74	74	
	HOUR 14 LST	70	70	74	73	67	64	67	69	65	70	71	67	69	
	HOUR 20 LST	80	76	84	81	80	76	74	76	76	80	77	78	78	
S	PERCENT POSSIBLE SUNSHINE		60	44		86	88	85	85	87	65	56	76		
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	0	0	0	0	0	1	0	0	0	0	0	1	
	THUNDERSTORMS	2	0	0	0	0	0	0	1	0	2	3	0	8	
CLOUDNESS	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.)	29.87	29.97	29.90	29.91	29.84	29.89	29.88	29.85	29.85	29.80	29.86	29.82	29.87	
	MEAN SEA-LEVEL PRESS. (IN.)	30.03	30.13	30.06	30.07	29.99	30.04	30.03	30.00	30.01	29.96	30.02	29.97	30.03	
WINDS	RESULTANT SPEED (MPH)	3.4	14.3	11.9	9.6	3.6	11.9	13.6	14.2	12.0	5.5	14.6	1.7	9.5	
	RES. DIR. (TENS OF DEGS.)	08	05	06	05	05	07	06	06	05	07	05	36	06	
	MEAN SPEED (MPH)	11.7	15.8	14.7	12.3	8.0	12.9	14.1	14.8	12.9	10.0	15.9	8.4	12.6	
	PREVAIL.DIR.(TENS OF DEGS.)	08	05	07	07	28	07	06	05	06	06	06	04	06	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	31	38	35	26	24	28	26	29	28	33	38	28	38	
	DIR. (TENS OF DEGS.)	24	04	02	06	03	06	05	05	07	07	03	24	03	
	DATE OF OCCURRENCE	15	28	12	15	18	22	28	12	06	01	11	31	NOV 11	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	38	44	41	31	29	33	32	35	32	41	49	33	49	
DIR. (TENS OF DEGS.)	23	04	02	06	01	06	05	05	06	07	07	24	07		
DATE OF OCCURRENCE	15	28	12	15	17	22	28	12	06	01	13	31	NOV 13		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.24	1.23	2.08	2.56	0.29	0.58	4.40	3.24	0.90	2.81	5.55	0.75	26.63	
	GREATEST 24-HOUR (IN.)	1.31	0.74	0.44	1.20	0.13	0.15	3.41	1.07	0.25	1.49	2.06	0.49	3.41	
	DATE OF OCCURRENCE	25-26	11-12	13-14	20-21	29-30	19-20	22-23	12-13	05-06	09-10	25-26	24	JUL 22-23	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	15	11	16	16	4	15	18	16	15	15	22	7	170		
PRECIPITATION 0.10	5	3	9	4	2	1	4	6	2	4	10	2	52		
PRECIPITATION 1.00	0	0	0	1	0	0	1	1	0	0	2	0	5		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0															

NORMALS, MEANS, AND EXTREMES LIHUE (PHLI)

LATITUDE: 21° 58'N LONGITUDE: -159° 20'W ELEVATION (FT): GRND: 104 BARO: 104 TIME ZONE: HAWAII (UTC -10) WBAN: 22536

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	77.9	77.9	78.1	78.8	80.6	82.7	83.9	84.9	85.0	83.5	81.0	79.0	81.1
	MEAN DAILY MAXIMUM	59	78.0	77.8	78.2	79.2	81.0	82.9	83.8	84.5	84.7	83.3	80.9	78.7	81.1
	HIGHEST DAILY MAXIMUM	59	86	86	88	88	88	89	89	90	90	90	89	87	90
	YEAR OF OCCURRENCE		2006	1986	1986	1981	1981	1969	1981	1987	1995	1957	1995	2005	SEP 1995
	MEAN OF EXTREME MAXS.	59	82.1	82.0	82.4	82.5	83.8	84.8	85.8	86.4	86.7	86.2	84.1	82.4	84.1
	NORMAL DAILY MINIMUM	30	65.4	65.5	67.3	68.9	70.3	72.7	74.0	74.5	74.0	72.8	70.8	67.6	70.3
	MEAN DAILY MINIMUM	59	65.1	65.2	66.4	68.1	69.9	72.2	73.2	74.0	73.5	72.1	70.3	67.3	69.8
	LOWEST DAILY MINIMUM	59	50	52	51	56	58	61	62	66	65	61	57	52	50
	YEAR OF OCCURRENCE		1969	1962	1955	1958	1996	1987	1979	1979	1981	2006	1958	1953	JAN 1969
	MEAN OF EXTREME MINS.	59	57.8	58.0	58.8	61.9	63.9	67.5	68.8	69.8	68.4	66.3	64.0	60.0	63.8
	NORMAL DRY BULB	30	71.7	71.7	72.7	73.9	75.4	77.7	79.0	79.7	79.5	78.2	75.9	73.3	75.7
	MEAN DRY BULB	59	71.5	71.5	72.4	73.7	75.6	77.7	78.8	79.4	79.1	77.7	75.6	73.0	75.5
	MEAN WET BULB	26	65.7	65.3	66.4	67.5	69.0	71.0	72.0	72.4	72.3	71.7	69.8	67.5	69.2
	MEAN DEW POINT	26	63.5	62.9	64.1	65.3	66.8	69.0	70.0	70.4	70.3	69.6	67.9	65.4	67.1
NORMAL NO. DAYS WITH:															
MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	
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	207	188	239	266	323	382	433	455	435	408	327	257	3920
RH	NORMAL (PERCENT)	30	75	75	74	74	74	74	74	74	74	76	76	76	75
	HOUR 02 LST	30	81	81	80	80	80	80	80	79	80	81	80	81	80
	HOUR 08 LST	30	80	79	77	76	75	75	76	76	76	78	79	80	77
	HOUR 14 LST	30	66	65	66	67	66	66	66	66	65	67	69	68	66
	HOUR 20 LST	30	78	77	76	77	77	77	77	77	76	77	78	78	77
S	PERCENT POSSIBLE SUNSHINE	53	55	57	59	55	61	63	62	64	68	60	49	49	59
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI) THUNDERSTORMS	46 59	0.0 1.1	0.0 0.7	0.0 1.1	0.0 0.4	0.0 0.5	0.0 0.1	0.0 0.2	0.0 0.2	0.0 0.4	0.0 1.0	0.0 1.0	0.0 0.9	0.0 7.6
CLOUDNESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	48	4.6	4.6	5.2	5.5	5.3	5.0	5.1	4.9	4.6	4.9	5.2	4.9	5.0
	MIDNIGHT-MIDNIGHT (OKTAS)	33	4.5	4.5	5.1	5.4	5.2	5.0	5.2	4.9	4.6	4.9	5.2	4.8	4.9
	MEAN NO. DAYS WITH:														
	CLEAR	47	8.0	7.0	4.8	2.9	3.0	3.4	2.5	3.5	5.3	5.1	3.9	5.9	55.3
PARTLY CLOUDY	47	12.8	12.1	13.9	13.8	16.5	17.5	18.6	18.1	17.3	15.3	13.9	13.4	183.2	
CLOUDY	47	10.2	9.1	12.3	13.2	11.5	9.0	9.4	8.8	6.9	10.1	11.6	11.1	123.2	
PR	MEAN STATION PRESSURE(IN)	26	29.86	29.88	29.91	29.93	29.91	29.91	29.89	29.88	29.84	29.85	29.86	29.87	29.88
	MEAN SEA-LEVEL PRES. (IN)	26	30.01	30.03	30.06	30.08	30.06	30.06	30.04	30.02	29.99	29.99	30.01	30.02	30.03
WINDS	MEAN SPEED (MPH)	26	12.4	12.7	13.5	14.8	13.4	14.5	14.9	14.1	12.8	12.7	13.3	12.9	13.5
	PREVAIL.DIR(TENS OF DEGS)	30	06	06	06	06	06	06	06	06	06	06	06	06	06
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	12	46	38	35	36	31	35	31	33	33	36	38	48	48
	DIR. (TENS OF DEGS)		22	04	02	05	06	09	06	07	07	05	03	25	25
	YEAR OF OCCURRENCE		2004	2009	2009	2000	2006	2001	2006	2007	2007	2005	2009	2007	DEC 2007
	MAXIMUM 3-SECOND														
SPEED (MPH)	12	59	48	43	46	37	38	37	38	40	41	49	55	59	
DIR. (TENS OF DEGS)		21	20	24	05	06	09	06	06	04	07	07	25	21	
YEAR OF OCCURRENCE		2004	2004	2007	2000	2006	2001	2006	2006	2007	2009	2009	2007	JAN 2004	
PRECIPITATION	NORMAL (IN)	30	4.59	3.26	3.58	3.00	2.87	1.82	2.12	1.91	2.69	4.25	4.70	4.78	39.57
	MAXIMUM MONTHLY (IN)	59	17.56	11.35	36.13	10.65	12.59	4.83	8.85	8.13	10.87	18.04	18.45	22.91	36.13
	YEAR OF OCCURRENCE		1956	1989	2006	1972	1977	1991	1954	1959	1980	1982	1955	1968	MAR 2006
	MINIMUM MONTHLY (IN)	59	0.30	T	0.19	0.32	0.10	0.32	0.75	0.44	0.44	0.39	0.58	.08	T
	YEAR OF OCCURRENCE		1986	1983	2008	1992	2000	2007	1956	2007	2007	2007	1963	2005	FEB 1983
	MAXIMUM IN 24 HOURS (IN)	59	11.09	7.28	6.71	6.52	6.70	2.17	5.04	5.43	7.16	8.46	11.20	11.54	11.54
	YEAR OF OCCURRENCE		1956	1954	2006	1972	1977	1971	1954	1959	1980	1978	1955	1968	DEC 1968
	NORMAL NO. DAYS WITH:														
PRECIPITATION >= 0.01	30	14.1	12.1	16.3	17.5	15.6	17.0	19.8	17.1	15.5	17.8	17.7	17.1	197.6	
PRECIPITATION >= 1.00	30	1.0	0.8	0.9	0.6	0.6	0.2	0.1	0.2	0.3	0.7	1.1	1.0	7.5	
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)	48	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)	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) 2009 LIHUE (PHLI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	6.12	1.65	2.81	3.25	12.20	3.07	2.76	1.27	10.87	4.49	1.89	4.26	54.64
1981	1.12	1.92	2.90	4.13	0.91	0.92	3.76	2.04	1.98	4.17	5.47	8.82	38.14
1982	14.08	5.04	10.56	4.88	3.63	2.02	2.72	3.37	1.71	18.04	3.67	4.68	74.40
1983	0.87	T	0.64	1.29	2.37	1.10	1.79	1.82	1.83	2.57	1.27	0.85	16.40
1984	2.19	1.21	0.96	3.19	0.48	0.87	1.25	0.70	3.23	1.94	9.76	4.34	30.12
1985	2.75	7.40	2.11	1.65	1.42	0.75	0.88	1.71	3.15	3.20	3.38	0.51	28.91
1986	0.30	1.02	2.02	1.95	2.59	1.85	3.20	2.97	2.85	1.98	5.98	1.28	27.99
1987	1.35	2.79	2.13	3.57	1.85	1.43	2.23	1.58	4.41	4.31	2.81	14.49	42.95
1988	9.81	1.46	2.63	1.60	3.79	0.53	1.95	3.28	1.09	1.88	8.18	6.86	43.06
1989	7.09	11.35	8.62	2.12	1.28	2.14	6.90	2.56	1.42	5.24	5.08	2.97	56.77
1990	9.75	1.75	2.94	2.94	2.30	0.48	1.51	1.27	2.00	1.12	9.97	3.34	39.37
1991	0.68	1.68	9.78	3.36	0.73	4.83	1.81	2.44	1.24	4.67	3.37	7.04	41.63
1992	1.13	3.23	4.26	0.32	2.58	1.05	1.68	2.44	3.13	5.86	2.29	22.20	50.17
1993	0.75	0.46	0.32	2.00	2.62	0.60	1.73	1.75	1.77	4.81	2.69	2.77	22.27
1994	3.99	6.73	3.33	1.48	1.46	3.03	1.35	0.92	3.02	5.41	1.18	1.09	32.99
1995	0.89	6.39	1.28	3.73	0.87	1.15	1.64	2.20	2.09	3.39	16.15	6.79	46.57
1996	5.14	4.16	3.90	1.25	1.51	4.38	1.82	.93	7.85	7.24	12.24	5.72	56.14
1997	5.62	2.02	8.78	3.52	9.95	1.20	2.54	3.05	2.79	3.61	2.60	2.34	48.02
1998	5.56	0.64	1.50	1.93	1.42	1.90	1.47	5.69	1.31	0.98	1.92	2.15	26.47
1999	4.41	1.12	1.25	3.12	4.38	1.44	2.70	1.78	1.91	4.82	2.35	3.91	33.19
2000	2.27	0.33	0.97	3.32	0.10	1.12	1.50	0.46	4.33	1.02	1.35	1.19	17.96
2001	0.83	3.92	2.85	2.07	0.90	4.03	1.08	1.86	1.19	2.37	6.65	1.50	29.25
2002	5.26	0.94	7.86	1.40	3.98	1.43	1.37	2.52	0.81	2.77	2.50	1.08	31.92
2003	2.10	4.42	7.07	1.76	2.35	1.40	1.71	0.86	2.53	3.83	4.74	3.01	35.78
2004	6.73	5.36	2.55	1.73	1.07	2.72	1.54	4.41	2.72	6.99	4.80	9.29	49.91
2005	9.54	5.83	1.11	1.41	1.73	1.36	0.75	0.63	2.56	1.18	1.43	0.08	27.61
2006	1.88	8.64	36.13	1.31	1.32	0.77	3.76	4.24	1.70	3.71	2.98	0.59	67.03
2007	1.69	1.50	5.82	0.72	0.60	0.32	0.95	0.44	0.44	0.39	6.14	5.36	24.37
2008	1.19	1.34	0.19	1.80	1.25	1.68	1.04	1.20	1.65	3.15	6.12	19.46	40.07
2009	2.24	1.23	2.08	2.56	0.29	0.58	4.40	3.24	0.90	2.81	5.55	0.75	26.63
POR= 59 YRS	5.09	3.56	4.68	2.82	2.55	1.62	2.05	2.02	2.29	4.18	5.18	5.23	41.27

WBAN : 22536

AVERAGE TEMPERATURE (°F) 2009 LIHUE (PHLI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	72.3	71.1	73.1	73.5	75.5	76.6	78.2	79.0	79.1	76.7	75.7	73.9	75.4
1981	73.0	72.6	74.8	76.4	77.9	79.8	79.9	81.2	79.5	77.5	74.8	72.4	76.7
1982	71.3	72.0	72.8	74.6	76.3	78.3	80.7	80.2	79.8	77.4	76.4	72.4	76.0
1983	71.3	71.0	72.9	74.5	74.7	78.3	78.6	79.2	78.8	77.6	76.1	72.5	75.5
1984	73.8	73.7	75.2	76.4	78.2	79.3	80.1	80.5	80.0	79.0	77.5	73.7	77.3
1985	70.7	72.8	73.5	72.9	74.8	77.7	79.9	79.9	78.9	77.4	73.5	72.0	75.3
1986	71.1	71.3	73.3	75.4	76.3	77.8	79.5	80.2	80.1	78.7	76.2	73.0	76.1
1987	71.6	69.4	71.3	72.5	72.0	76.8	78.9	80.6	79.3	78.3	76.4	74.5	75.1
1988	71.7	73.8	73.6	75.4	76.4	78.9	78.7	79.2	79.9	77.1	77.2	74.2	76.3
1989	73.1	71.7	73.2	72.2	75.1	77.8	78.2	78.4	79.0	76.7	74.5	71.0	75.1
1990	72.5	69.8	71.4	73.5	74.4	77.6	78.5	80.0	80.0	79.2	74.9	72.1	75.3
1991	71.1	72.3	71.3	73.7	75.6	76.2	78.3	79.0	78.5	78.0	76.7	73.9	75.4
1992	70.4	70.1	72.5	72.5	74.7	78.6	79.3	80.0	79.7	77.5	74.9	74.5	75.4
1993	69.4	70.5	72.5	75.6	75.5	78.5	78.9	79.9	79.8	77.7	75.2	73.9	75.6
1994	70.2	72.5	71.6	74.0	76.2	77.2	79.5	81.2	80.8	79.1	78.0	74.0	76.2
1995	72.8	71.6	73.3	73.6	75.4	78.4	80.0	79.6	79.3	79.3	76.8	75.4	76.3
1996	72.5	70.1	70.6	75.2	75.9	78.6	80.1	80.5	79.8	78.8	76.0	71.9	75.8
1997	70.2	73.8	73.5	72.4	73.3	79.0	79.2	79.9	80.2	78.8	74.4	71.3	75.5
1998	69.1	69.9	71.8	73.0	74.0	76.1	76.8	77.3	78.1	77.1	75.7	72.3	74.3
1999	71.2	71.1	72.6	73.5	75.5	76.9	77.4	78.2	78.5	77.2	75.2	73.1	75.0
2000	71.1	72.2	73.9	72.7	76.7	78.4	79.5	79.7	79.2	79.1	77.4	74.4	76.2
2001	75.2	72.1	73.8	75.6	76.6	77.6	79.5	79.4	80.2	77.9	75.7	74.2	76.5
2002	72.3	71.5	71.7	74.4	76.7	79.3	79.4	79.7	79.5	78.5	74.9	73.5	76.0
2003	69.9	71.4	73.5	75.4	77.4	78.9	79.2	80.0	78.7	77.9	76.2	73.2	76.0
2004	71.8	73.4	72.2	73.8	76.6	78.4	80.1	79.8	80.3	78.5	75.3	73.1	76.1
2005	71.5	72.5	71.1	75.4	78.0	79.4	80.1	80.0	80.7	78.6	76.0	74.1	76.5
2006	76.1	72.2	72.9	73.9	75.2	78.3	79.1	78.6	78.8	77.3	76.4	74.1	76.1
2007	74.4	72.0	73.7	74.6	77.1	79.1	79.6	80.9	80.3	79.0	76.2	74.8	76.8
2008	71.4	73.0	75.3	74.3	76.4	77.6	79.3	80.8	78.5	77.7	74.2	72.5	75.9
2009	70.3	69.7	69.6	70.1	74.3	78.5	79.1	78.7	79.0	78.6	75.6	71.3	74.6
POR= 59 YRS	71.5	71.5	72.4	73.7	75.6	77.7	78.8	79.4	79.1	77.7	75.6	73.0	75.5

HEATING DEGREE DAYS (base 65°F) 2009 LIHUE (PHLI)

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	3	1	0	0	0	0	4
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	2	0	0	0	0	2
1996-97	0	0	0	0	0	0	1	0	0	0	0	0	1
1997-98	0	0	0	0	0	0	0	2	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
2001-02	0	0	0	0	0	0	0	0	0	0	0	0	0
2002-03	0	0	0	0	0	0	0	0	0	0	0	0	0
2003-04	0	0	0	0	0	0	0	0	0	0	0	0	0
2004-05	0	0	0	0	0	0	0	0	0	0	0	0	0
2005-06	0	0	0	0	0	0	0	0	0	0	0	0	0
2006-07	0	0	0	0	0	0	0	0	0	0	0	0	0
2007-08	0	0	0	0	0	0	0	0	0	0	0	0	0
2008-09	0	0	0	0	0	0	0	0	2	0	0	0	2
2009-	0	0	0	0	0	0	0	0	0	0	0	0	0

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COOLING DEGREE DAYS (base 65°F) 2009 LIHUE (PHLI)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	229	186	258	261	330	353	417	438	429	369	328	283	3881
1981	254	217	311	347	406	453	469	508	444	396	300	238	4343
1982	200	202	246	292	357	406	494	480	451	391	346	237	4102
1983	202	173	252	292	307	404	430	445	420	397	338	238	3898
1984	281	260	325	347	412	434	476	487	459	444	380	277	4582
1985	186	224	272	243	309	387	469	472	425	392	260	225	3864
1986	198	183	264	321	358	390	458	477	459	430	344	254	4136
1987	213	130	203	234	226	360	438	490	435	420	349	301	3799
1988	217	263	275	317	363	422	431	450	452	384	375	294	4243
1989	256	193	261	222	321	389	415	426	425	368	293	189	3758
1990	240	142	203	262	298	386	425	473	453	446	305	225	3858
1991	194	210	205	268	334	343	421	445	412	411	356	281	3880
1992	173	153	240	230	306	417	449	471	447	396	304	302	3888
1993	144	160	243	323	330	409	439	469	452	401	314	281	3965
1994	169	216	211	277	353	376	458	509	482	445	397	288	4181
1995	247	192	261	264	327	410	472	459	438	450	360	332	4212
1996	240	157	180	314	346	413	475	487	449	435	337	221	4054
1997	171	254	267	228	265	424	448	470	463	435	289	201	3915
1998	133	145	220	244	286	338	374	388	398	385	328	235	3474
1999	197	178	246	261	333	364	391	417	413	385	313	258	3756
2000	195	214	282	240	372	409	456	461	434	446	377	297	4183
2001	321	204	280	324	366	383	459	455	463	411	329	290	4285
2002	235	187	216	290	367	436	456	463	440	423	304	271	4088
2003	159	185	267	318	393	422	449	472	420	409	340	262	4096
2004	215	249	228	267	370	409	478	463	464	425	316	257	4141
2005	207	215	198	319	411	440	475	473	478	431	338	291	4276
2006	354	206	251	275	323	407	443	429	423	389	350	289	4139
2007	296	201	277	294	383	430	460	501	467	441	343	313	4406
2008	206	241	329	283	360	383	450	495	414	401	279	244	4085
2009	170	139	150	159	296	408	445	433	428	428	324	201	3581

SNOWFALL (inches) 2009 LIHUE (PHLI)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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								
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-													
POR= 55 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

WBAN : 22536

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 (1971 - 2000). 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. 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.</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 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. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK MEDADATA SYSTEM", URL IS: https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</p> <p>NOTE: The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2009 LIHUE HAWAII (PHLI)

Lihue Airport, a little more than 100 feet above sea level, is located near the eastern shore of the island of Kauai. The island is 33 miles long and 25 miles wide and has an area of 555 square miles. The eastern one third of Kauai consists of broadly eroded valley lands, the western two thirds is mostly mountainous. Kawaikini, the highest elevation on the island, 5,170 feet above sea level, lies near the center of Kauai and is 20 miles northwest of the airport.

The outstanding features of the climate are the equable temperatures from day to day and season to season, the persistent northeasterly trade winds and the marked variation in rainfall from the wet to the dry season and place to place.

The equable temperatures are associated with the mid-ocean location of the island and to the small seasonal variation in the amount of energy received from the sun. The range in normal temperature from the coolest month, February, to the warmest month, August, less than 8 degrees. The daily range in temperature is also small, less than 15 degrees.

The trade winds blow across the island during most of each year and the dominance of these winds has a marked influence on the climate of the area. Completely cloudless skies are quite rare. On the average, six tenths to seven tenths of the sky is covered by clouds during the daylight hours.

Trade-wind showers are relatively common. Although heavy at times, most of the showers are light and of short duration. The frequency and intensity of the showers increase toward the mountains to the west. Mt. Waialeale receives 486 inches annually, the highest recorded annual average in the world. Mt. Waialeale has recorded annual rainfalls over 620 inches.

Normal annual rainfall is over 40 inches. Three-fourths of this total, on the average, falls during the seven-month wet season which extends from October through April. Widespread rainstorms, which account for much of the precipitation, occur most frequently during this period. Normal precipitation in January, the wettest month, is over 6 inches.

The dry season includes the months of May through September. June, the driest month, receives only about 1 1/2 inches of rain, on the average.

Hurricanes and other severe windstorms are quite rare. Strong winds do occur at times in connection with storm systems moving through the area, but seldom cause extensive damage.

Relative humidity, moderate to high in all seasons, is slightly higher in the wet season than in the dry. However, even during periods when the temperature and humidity are both high, the weather is seldom oppressive. This is due to the trade winds which provide a system of natural ventilation during most of each year.

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