

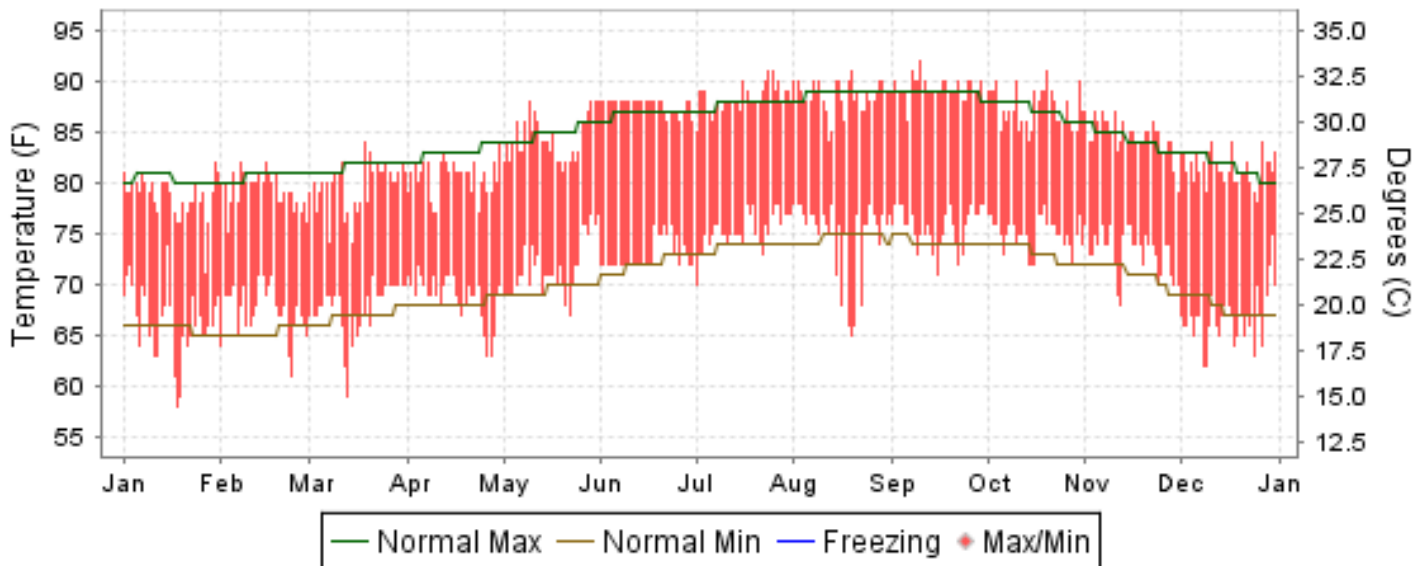


# 2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

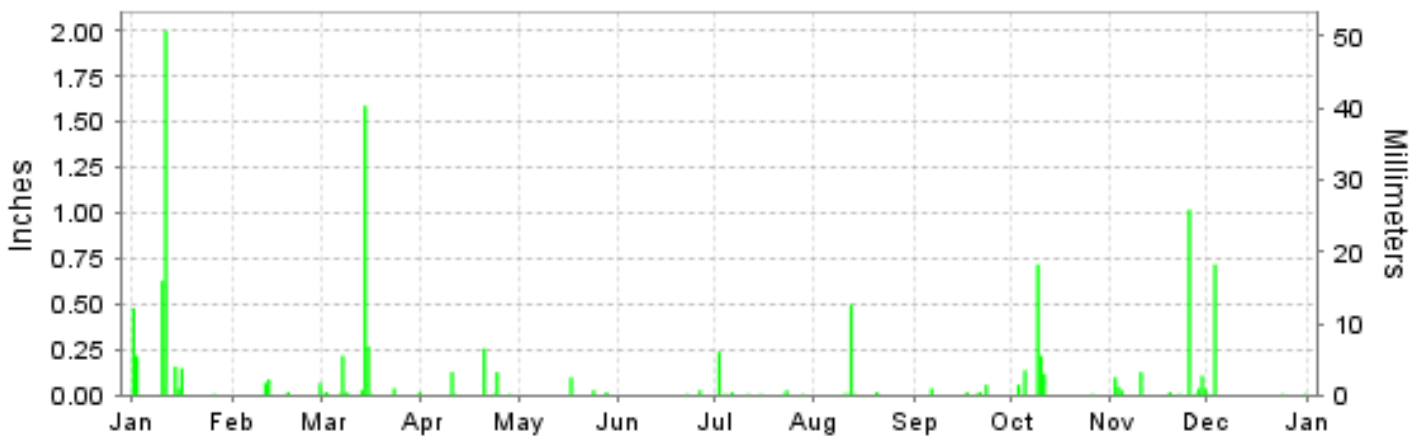
ISSN 0198-1706

## HONOLULU, HAWAII (PHNL)

### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2009

## HONOLULU (PHNL)

LATITUDE: 21° 19'N      LONGITUDE: -157° 56'W      ELEVATION (FT): GRND: 8      BARO: 18      TIME ZONE: HAWAII (UTC -10)      WBAN: 22521

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	78.6	79.3	79.7	80.6			88.4	88.5	89.3	87.3	84.6	81.4		
	HIGHEST DAILY MAXIMUM	82	82	84	84	88	88	91	91	92	91	87	84	92	
	DATE OF OCCURRENCE	30	15+	18	30	09	29+	25+	19	10	20	10+	27+	SEP 10	
	MEAN DAILY MINIMUM	66.4	67.5	67.7	68.8			75.4	74.7	75.7	75.1	73.2	66.7		
	LOWEST DAILY MINIMUM	58	61	59	63	67	72	70	65	71	72	68	62	58	
	DATE OF OCCURRENCE	18	23	13	27+	22	30+	01	19	15	28+	12	09+	JAN 18	
	AVERAGE DRY BULB	72.5	73.4	73.7	74.7			81.9	81.6	82.5	81.2	78.9	74.1		
	MEAN WET BULB	65.9	64.2	65.3	66.0	69.5	71.1	71.3	71.8	71.3	72.6	69.5	67.3	68.8	
	MEAN DEW POINT	62.0	58.4	60.5	60.8	64.7	65.3	66.2	66.7	65.9	68.6	64.8	63.2	63.9	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	5	10	12	4	0	0	31
	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	0	0			0	0	0	0	0	0		
	COOLING DEGREE DAYS	241	242	276	298			529	525	534	511	425	288		
RH	MEAN (PERCENT)	71	62	66	64	65	59	62	63	60	68	65	70	65	
	HOUR 02 LST	78	68	75	72	73	68	71	73	70	76	71	79	73	
	HOUR 08 LST	71	62	64	62	59	54	60	61	58	63	62	69	62	
	HOUR 14 LST	62	53	55	56	56	47	50	50	46	57	54	58	54	
	HOUR 20 LST	72	65	69	67	66	63	66	66	64	70	69	70	67	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	THUNDERSTORMS	1	2	0	1	0	0	0	0	0	1	1	1	7	
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.)	30.00	30.08	30.01	30.03	29.96	30.00	29.98	29.95	29.96	29.93	29.97	29.94	29.98	
	MEAN SEA-LEVEL PRESS. (IN.)	30.02	30.09	30.03	30.04	29.98	30.01	30.00	29.97	29.98	29.94	29.99	29.96	30.00	
WINDS	RESULTANT SPEED (MPH)	3.1	9.0	9.3	7.6	1.3	10.5	11.2	11.7	10.2	4.9	10.7	0.8	7.4	
	RES. DIR. (TENS OF DEGS.)	05	05	06	05	11	06	06	06	06	07	05	35	06	
	MEAN SPEED (MPH)	8.8	11.0	11.8	11.0	6.9	11.6	12.0	12.5	11.3	7.7	11.6	5.7	10.2	
	PREVAIL.DIR.(TENS OF DEGS.)	06	06	06	06	15	06	06	06	06	06	06	33	06	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	30	29	30	28	22	29	28	29	29	26	35	23	35	
	DIR. (TENS OF DEGS.)	35	02	06	07	25	07	04	06	07	07	07	26	07	
	DATE OF OCCURRENCE	11	26	02	01	31	21	08	21	02	17	17	31	NOV 17	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	37	35	35	36	28	38	40	37	35	33	44	29	44	
DIR. (TENS OF DEGS.)	34	02	08	09	28	08	06	07	06	08	08	04	08		
DATE OF OCCURRENCE	11	26	27	04	31	21	14	24	02	17	17	20	NOV 17		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.69	0.25	2.25	0.55	0.15	0.04	0.34	0.55	0.15	1.27	1.56	0.75	11.55	
	GREATEST 24-HOUR (IN.)	2.63	0.16	1.82	0.26	0.10	0.03	0.24	0.51	0.06	0.72	1.02	0.72	2.63	
	DATE OF OCCURRENCE	10-11	11-12	14-15	20	17	26	02	11-12	23	09	25	03	JAN 10-11	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	8	4	12	6	3	2	8	5	5	6	11	4	74	
PRECIPITATION 0.10	6	0	3	3	1	0	1	1	0	4	4	1	24		
PRECIPITATION 1.00	1	0	1	0	0	0	0	0	0	0	1	0	3		
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 HONOLULU (PHNL)

**LATITUDE:** 21 ° 19'N      **LONGITUDE:** -157 ° 56'W      **ELEVATION (FT):** GRND: 8    BARO: 18      **TIME ZONE:** HAWAII (UTC -10)      **WBAN: 22521**

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
<b>TEMPERATURE °F</b>	NORMAL DAILY MAXIMUM	30	80.4	80.7	81.7	83.1	84.9	86.9	87.8	88.9	88.9	87.2	84.3	81.7	84.7
	MEAN DAILY MAXIMUM	60	80.0	80.2	81.0	82.4	84.1	86.1	86.9	87.9	87.9	86.4	83.8	81.0	84.0
	HIGHEST DAILY MAXIMUM	40	88	88	88	91	93	92	94	93	95	94	93	89	95
	YEAR OF OCCURRENCE		1996	1984	1998	1996	1988	1996	1995	1997	1994	1984	1986	1995	SEP 1994
	MEAN OF EXTREME MAXS.	60	83.8	83.9	84.7	85.9	87.4	88.4	89.3	90.3	90.5	89.6	87.2	84.9	87.2
	NORMAL DAILY MINIMUM	30	65.7	65.4	66.9	68.2	69.6	72.1	73.8	74.7	74.2	73.2	71.1	67.8	70.2
	MEAN DAILY MINIMUM	60	66.0	66.0	67.3	68.9	70.4	72.4	73.6	74.4	73.8	72.6	70.7	67.8	70.3
	LOWEST DAILY MINIMUM	40	53	53	55	57	60	65	66	65	66	61	57	54	53
	YEAR OF OCCURRENCE		1998	1983	1976	1985	2006	1982	1990	2009	1985	1993	1990	1962	JAN 1998
	MEAN OF EXTREME MINS.	60	59.0	59.2	60.7	63.4	65.3	68.3	69.7	70.3	69.5	67.4	64.8	60.7	64.9
	NORMAL DRY BULB	30	73.0	73.0	74.3	75.6	77.2	79.5	80.8	81.8	81.5	80.2	77.7	74.8	77.5
	MEAN DRY BULB	60	73.0	73.1	74.2	75.7	77.4	79.4	80.5	81.3	80.9	79.5	77.2	74.4	77.2
	MEAN WET BULB	26	66.2	65.5	66.5	67.0	68.5	69.9	70.9	71.4	71.7	71.2	69.7	67.5	68.8
	MEAN DEW POINT	26	63.8	62.9	63.5	64.1	65.2	66.5	67.9	68.4	69.1	68.7	67.3	65.0	66.0
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.1	0.4	2.0	5.7	11.7	10.5	4.7	0.4	0.0	35.5
	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	
<b>H/C</b>	NORMAL HEATING DEG. DAYS	30	0	0	0	0	0	0	0	0	0	0	0	0	0
	NORMAL COOLING DEG. DAYS	30	249	225	288	319	379	436	490	521	497	472	382	303	4561
<b>RH</b>	NORMAL (PERCENT)	30	73	71	69	67	66	65	66	66	68	69	71	73	69
	HOURLY 02 LST	30	82	80	77	76	75	74	74	74	76	77	78	80	77
	HOURLY 08 LST	30	81	79	73	70	67	66	68	68	70	71	75	79	72
	HOURLY 14 LST	30	61	59	57	55	54	52	52	52	53	56	59	60	56
	HOURLY 20 LST	30	74	72	71	70	69	69	69	69	70	71	73	74	71
<b>S</b>	PERCENT POSSIBLE SUNSHINE	46	65	68	72	70	72	74	76	77	77	71	64	63	71
<b>W/O</b>	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	46	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
	THUNDERSTORMS	60	0.8	1.0	0.8	0.5	0.3	0.1	0.2	0.1	0.4	0.8	0.9	0.8	6.7
<b>CLOUDNESS</b>	MEAN: SUNRISE-SUNSET (OKTAS)	52	4.3	4.4	4.6	4.9	4.6	4.4	4.2	4.1	4.2	4.5	4.6	4.4	4.4
	MIDNIGHT-MIDNIGHT (OKTAS)	34	4.1	4.1	4.3	4.5	4.3	4.2	4.2	3.9	3.9	4.1	4.5	4.3	4.2
	MEAN NO. DAYS WITH: CLEAR	49	9.5	8.1	7.4	5.9	6.7	6.5	7.4	8.0	7.9	7.5	7.2	7.9	90.0
	PARTLY CLOUDY	49	12.9	12.5	14.1	14.6	15.6	17.4	18.0	16.9	15.9	14.8	13.4	13.7	179.8
	CLOUDY	49	8.5	7.6	9.3	9.6	8.7	6.2	5.1	5.7	5.7	8.1	8.8	8.7	92.0
<b>PR</b>	MEAN STATION PRESSURE(IN)	26	29.99	30.01	30.03	30.05	30.03	30.02	30.00	29.98	29.96	29.96	29.98	29.99	30.00
	MEAN SEA-LEVEL PRES. (IN)	26	30.00	30.02	30.05	30.06	30.04	30.04	30.02	30.00	29.98	29.98	29.99	30.01	30.02
<b>WINDS</b>	MEAN SPEED (MPH)	26	8.8	9.3	10.3	11.2	10.6	12.0	12.1	11.9	10.3	9.7	9.7	9.4	10.4
	PREVAIL.DIR(TENS OF DEGS)	13	06	06	06	06	06	06	06	06	06	06	06	06	06
	MAXIMUM 2-MINUTE: SPEED (MPH)	11	40	37	32	35	29	30	30	31	30	31	35	39	40
	DIR. (TENS OF DEGS)		25	24	31	05	07	07	06	07	08	08	07	25	25
	YEAR OF OCCURRENCE		2004	2004	2005	2000	2004	1999	1999	2001	2003	2007	2009	2007	JAN 2004
	MAXIMUM 3-SECOND SPEED (MPH)	11	47	47	41	44	36	37	40	37	37	37	44	48	48
	DIR. (TENS OF DEGS)		25	25	25	07	04	03	06	07	05	07	08	25	25
	YEAR OF OCCURRENCE		2004	2004	2007	2000	2004	2005	2009	2009	2002	2001	2009	2007	DEC 2007
<b>PRECIPITATION</b>	NORMAL (IN)	30	2.73	2.35	1.89	1.11	0.78	0.43	0.50	0.46	0.74	2.18	2.27	2.85	18.29
	MAXIMUM MONTHLY (IN)	63	14.74	13.68	20.79	8.92	7.23	2.46	2.33	3.74	2.74	11.15	18.79	17.29	20.79
	YEAR OF OCCURRENCE		1949	1955	1951	1963	1965	1971	1989	2004	1947	1978	1996	1987	MAR 1951
	MINIMUM MONTHLY (IN)	63	0.18	0.06	0.01	0.01	0.03	T	0.03	T	0.05	0.07	0.03	0.04	T
	YEAR OF OCCURRENCE		1986	1983	1957	1960	2000	1959	1950	1974	1977	1996	1962	2002	AUG 1974
	MAXIMUM IN 24 HOURS (IN)	63	6.72	6.88	17.07	4.21	3.44	2.28	2.20	3.03	1.40	7.57	9.15	8.25	17.07
	YEAR OF OCCURRENCE		1963	1955	1958	1972	1965	1967	1989	2004	1963	1978	1954	1987	MAR 1958
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	8.8	7.9	9.0	8.6	7.3	5.8	7.2	5.4	6.9	7.3	9.1	9.7	93.0
	PRECIPITATION >= 1.00	30	0.7	0.7	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.6	0.7	4.4
<b>SNOWFALL</b>	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)	2	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)	52	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)	48	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 HONOLULU (PHNL)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	8.91	2.26	3.04	1.13	0.78	1.76	0.37	0.36	0.41	0.30	0.21	7.37	26.90
1981	0.81	0.97	0.71	1.01	0.94	0.14	0.42	0.70	0.39	1.84	1.01	4.47	13.41
1982	12.82	2.16	3.73	1.28	0.13	0.35	0.20	1.98	0.52	7.24	1.32	3.19	34.92
1983	0.32	0.06	0.53	0.42	0.35	0.26	0.22	0.29	1.16	0.23	0.13	1.06	5.03
1984	0.21	0.60	1.08	2.41	0.16	0.08	0.23	0.04	1.36	1.89	3.58	5.44	17.08
1985	1.46	3.87	1.26	0.20	1.11	0.13	0.53	0.16	1.28	5.08	2.11	0.19	17.38
1986	0.18	1.38	0.17	0.35	0.81	0.36	1.54	0.90	2.00	1.23	4.23	0.78	13.93
1987	0.42	0.86	0.31	0.65	0.73	0.46	0.33	0.22	1.13	0.20	0.93	17.29	23.53
1988	3.05	1.31	0.67	0.50	1.25	0.04	0.12	0.34	0.86	0.23	1.39	6.71	16.47
1989	2.07	6.48	2.58	1.23	0.29	0.11	2.33	0.08	0.15	10.37	0.51	1.32	27.52
1990	4.32	4.15	0.86	0.30	0.30	0.08	0.49	0.01	0.98	0.47	2.96	4.92	19.84
1991	0.80	2.09	6.24	1.00	0.48	0.26	0.16	0.16	0.56	3.43	1.52	1.24	17.94
1992	0.43	1.35	0.72	0.11	1.13	0.10	2.01	0.97	2.08	2.57	1.04	6.49	19.00
1993	0.70	0.41	0.02	0.23	0.19	0.11	0.69	1.03	0.10	1.63	0.46	0.27	5.84
1994	0.78	7.04	3.77	0.46	0.09	0.23	0.48	0.14	0.39	1.56	0.20	0.45	15.59
1995	0.54	6.53	1.33	1.15	0.45	0.05	0.19	0.44	0.33	0.36	0.92	1.31	13.60
1996	3.52	1.00	2.68	0.34	0.13	1.01	.74	2.17	.78	.07	18.79	1.89	33.12
1997	6.92	0.95	4.90	1.02	0.63	0.40	0.52	0.13	0.67	2.57	0.84	0.44	19.99
1998	0.77	0.21	0.03	0.54	0.16	0.29	0.19	0.15	0.05	0.13	0.85	1.15	4.52
1999	2.12	0.73	0.46	0.68	2.13	0.11	0.57	0.12	0.20	2.01	0.21	2.65	11.99
2000	1.26	0.07	0.38	0.46	0.03	0.03	0.41	1.17	0.78	0.25	2.09	0.17	7.10
2001	0.18	0.57	0.62	0.29	0.14	1.16	0.13	0.05	0.28	1.05	3.91	0.76	9.14
2002	3.91	0.69	2.51	0.08	1.96	0.07	0.08	0.27	0.10	2.11	0.36	0.04	12.18
2003	1.21	1.09	1.95	0.81	0.09	0.20	0.52	0.02	0.28	1.14	0.57	4.81	12.69
2004	6.88	9.47	0.56	0.58	1.29	0.31	0.09	3.74	1.01	1.25	7.87	5.96	39.01
2005	6.23	1.28	1.88	0.64	0.27	0.28	0.29	0.10	0.90	1.60	1.77	0.36	15.60
2006	1.53	2.62	16.92	0.75	1.11	0.09	0.08	0.11	0.66	2.50	2.50	0.58	29.45
2007	1.10	0.40	0.68	0.20	0.12	0.16	0.05	0.09	0.50	0.15	5.46	3.08	11.99
2008	0.29	0.42	0.08	0.20	0.53	0.55	0.80	0.38	0.43	0.57	2.93	7.58	14.76
2009	3.69	0.25	2.25	0.55	0.15	0.04	0.34	0.55	0.15	1.27	1.56	0.75	11.55
POR= 60 YRS	3.28	2.40	2.79	1.18	0.91	0.37	0.52	0.59	0.66	1.84	2.81	3.23	20.58

WBAN : 22521

**AVERAGE TEMPERATURE (°F) 2009 HONOLULU (PHNL)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	71.9	72.4	75.0	76.1	78.3	79.5	80.9	81.0	81.6	80.1	78.0	74.4	77.4
1981	73.2	73.6	74.7	75.9	77.3	80.6	79.7	80.1	80.7	78.3	76.7	74.0	77.1
1982	73.2	71.7	74.0	75.4	78.3	79.6	80.6	81.4	81.4	79.4	75.7	72.0	76.9
1983	71.9	71.3	73.5	74.6	75.7	78.9	79.7	82.4	82.3	81.1	80.1	75.1	77.2
1984	74.6	74.6	75.8	77.0	78.7	79.3	81.0	81.7	81.3	80.2	79.0	74.1	78.1
1985	71.4	73.9	74.5	74.5	76.5	79.2	81.6	81.9	81.1	79.8	75.1	73.3	76.9
1986	72.8	72.6	76.5	77.5	78.3	80.0	81.6	82.9	82.1	80.6	79.2	75.1	78.3
1987	73.4	71.2	74.0	76.0	75.7	80.4	82.1	82.7	82.9	81.4	78.8	75.8	77.9
1988	73.1	74.7	76.0	77.3	78.9	80.8	81.8	82.1	82.1	80.1	79.9	75.6	78.5
1989	74.5	73.6	75.3	74.5	78.4	80.9	81.6	81.4	81.9	78.6	76.7	72.9	77.5
1990	74.7	71.5	73.1	76.6	78.1	80.0	80.8	82.3	82.3	80.9	77.3	74.1	77.6
1991	72.4	73.4	72.9	75.9	77.8	79.4	81.2	82.4	81.5	80.0	79.5	76.2	77.7
1992	72.9	73.2	74.9	75.6	77.8	81.3	81.5	82.2	81.3	79.4	77.0	76.7	77.8
1993	70.9	71.1	74.0	77.4	77.2	80.2	80.6	81.3	81.1	79.7	76.3	75.0	77.1
1994	72.0	73.6	73.2	76.0	79.3	80.9	82.9	84.3	84.0	82.5	80.8	76.6	78.8
1995	74.2	73.4	75.6	76.4	78.6	81.3	83.3	83.4	83.2	82.7	80.2	79.1	79.3
1996	76.2	74.0	74.3	79.9	79.0	81.3	82.1	82.8	81.4	81.7	76.9	73.1	78.6
1997	72.3	74.7	75.3	76.3	76.2	81.1	81.5	82.6	82.7	80.6	76.4	74.0	77.8
1998	72.5	72.8	75.1	75.1	76.6	78.3	79.7	81.1	81.0	79.8	77.8	74.8	77.1
1999	73.3	73.7	74.6	75.4	77.1	78.8	79.3	80.8	80.2	78.3	76.9	74.1	76.9
2000	72.5	73.6	75.4	75.3	78.3	80.5	81.1	81.4	80.5	80.4	77.6	74.7	77.6
2001	75.4	74.1	75.0	76.6	78.2	79.7	81.5	82.2	82.1	79.9	77.4	76.4	78.2
2002	74.2	73.1	74.1	76.7	78.2	80.8	81.0	82.2	81.2	80.2	77.5	75.4	77.9
2003	72.5	73.8	75.7	77.3	79.0	80.5	82.4	83.2	82.1	81.1	78.8	75.7	78.5
2004	73.6	76.0	75.0	77.1	79.4	81.3	82.7	82.7	82.8	81.4	77.5	75.2	78.7
2005	72.7	73.9	73.8	78.7	81.3	82.7	83.2	83.6	81.1	78.6	77.1	73.5	78.4
2006	74.3	72.1	73.6	74.8	75.3	80.1	80.7	81.2	80.2	79.1	78.2	76.1	77.1
2007	74.9	73.4	74.2	76.7	78.4	80.7	81.6	82.1	81.6	80.2	76.6	75.6	78.0
2008	73.6	74.8	77.3	77.2	79.2	80.5	82.2	81.6	80.5	79.7	77.2	75.2	78.3
2009	72.5	73.4	73.7	74.7			81.9	81.6	82.5	81.2	78.9	74.1	
POR= 60 YRS	73.0	73.1	74.2	75.7	77.4	79.4	80.5	81.3	80.9	79.5	77.2	74.4	77.2

**HEATING DEGREE DAYS (base 65°F) 2009 HONOLULU (PHNL)**

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
2001-02	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	0	0	0	0	0
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 HONOLULU (PHNL)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	222	220	317	340	418	442	501	504	503	476	395	295	4633
1981	263	249	311	335	385	474	463	477	477	419	355	284	4492
1982	261	195	288	318	421	442	493	514	499	452	326	225	4434
1983	223	182	270	295	335	425	461	544	525	508	461	318	4547
1984	304	285	340	366	432	438	501	527	494	475	425	291	4878
1985	205	256	300	293	364	437	521	532	491	464	310	264	4437
1986	251	217	366	384	421	457	519	561	521	491	433	318	4939
1987	267	178	285	337	337	465	537	556	544	516	418	342	4782
1988	260	289	346	373	437	482	527	537	520	478	455	336	5040
1989	301	244	325	291	425	482	521	517	512	431	358	252	4659
1990	306	189	258	354	412	456	498	543	525	501	377	289	4708
1991	236	243	250	333	404	442	508	547	501	474	443	353	4734
1992	251	244	316	327	404	495	518	540	495	452	369	368	4779
1993	190	180	285	381	387	463	491	515	491	465	345	314	4507
1994	227	248	262	337	451	486	564	606	575	547	481	367	5151
1995	294	239	334	351	428	498	572	578	555	554	464	442	5309
1996	354	266	297	453	441	494	538	560	502	525	365	257	5052
1997	231	279	326	346	355	489	521	553	537	492	350	288	4767
1998	238	227	322	309	368	407	463	506	489	464	390	310	4493
1999	267	248	305	317	383	417	452	500	460	421	361	289	4420
2000	241	256	331	318	419	470	508	517	476	482	382	307	4707
2001	332	262	319	356	415	451	515	541	522	467	375	357	4912
2002	292	234	290	360	414	481	503	539	495	479	383	329	4799
2003	240	250	338	374	439	471	545	573	518	504	420	336	5008
2004	272	323	317	371	453	496	556	558	537	517	383	324	5107
2005	245	255	280	419	514	537	570	588	491	430	371	270	4970
2006	292	205	274	299	324	458	496	509	464	446	400	352	4519
2007	311	240	294	356	421	478	524	538	504	477	357	335	4835
2008	273	291	390	374	448	473	539	520	471	463	376	325	4943
2009	241	242	276	298			529	525	534	511	425	288	

**SNOWFALL (inches) 2009 HONOLULU (PHNL)**

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	0.0	0.0						
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-													
POR= 48 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 :**

<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: <a href="https://mi3.ncdc.noaa.gov/mi3qry/login.cfm">https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</a></p> <p><b>NOTE:</b> 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 HONOLULU HAWAII (PHNL)

Oahu, on which Honolulu is located, is the third largest of the Hawaiian Islands. The Koolau Range, at an average elevation of 2,000 feet parallels the northeastern coast. The Waianae Mountains, somewhat higher in elevation, parallel the west coast. Honolulu Airport, the business and Waikiki districts, and a number of the residential areas of Honolulu lie along the southern coastal plain.

The climate of Hawaii is unusually pleasant for the tropics. Its outstanding features are the persistence of the trade winds, the remarkable variability in rainfall over short distances, the sunniness of the leeward lowlands in contrast to the persistent cloudiness over nearby mountain crests, the equable temperature, and the general infrequency of severe storms.

The prevailing wind throughout the year is the northeasterly trade wind, although its average frequency varies from more than 90 percent during the summer to only 50 percent in January.

Heavy mountain rainfall sustains extensive irrigation of cane fields and the water supply for Honolulu. Oahu is driest along the coast west of the Waianaes where rainfall drops to about 20 inches a year. Daytime showers, usually light, often occur while the sun continues to shine, a phenomenon referred to locally as liquid sunshine.

The moderate temperature range is associated with the small seasonal variation in the energy received from the sun and the tempering effect of the surrounding ocean. Honolulu Airport has recorded as high as the lower 90s and as low as the lower 50s.

Because of the trade winds, even the warmest months are usually comfortable. But when the trades diminish or give way to southerly winds, a situation known locally as kona weather, or kona storms when stormy, the humidity may become oppressively high.

Intense rains of the October to April winter season sometimes cause serious, flash flooding. Thunderstorms are infrequent and usually mild and hail seldom occurs. Infrequently, a small tornado or a waterspout may do some damage. Only a few tropical cyclones have struck Hawaii, although others have come near enough for their outlying winds, waves, clouds, and rain to affect the Islands.

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