

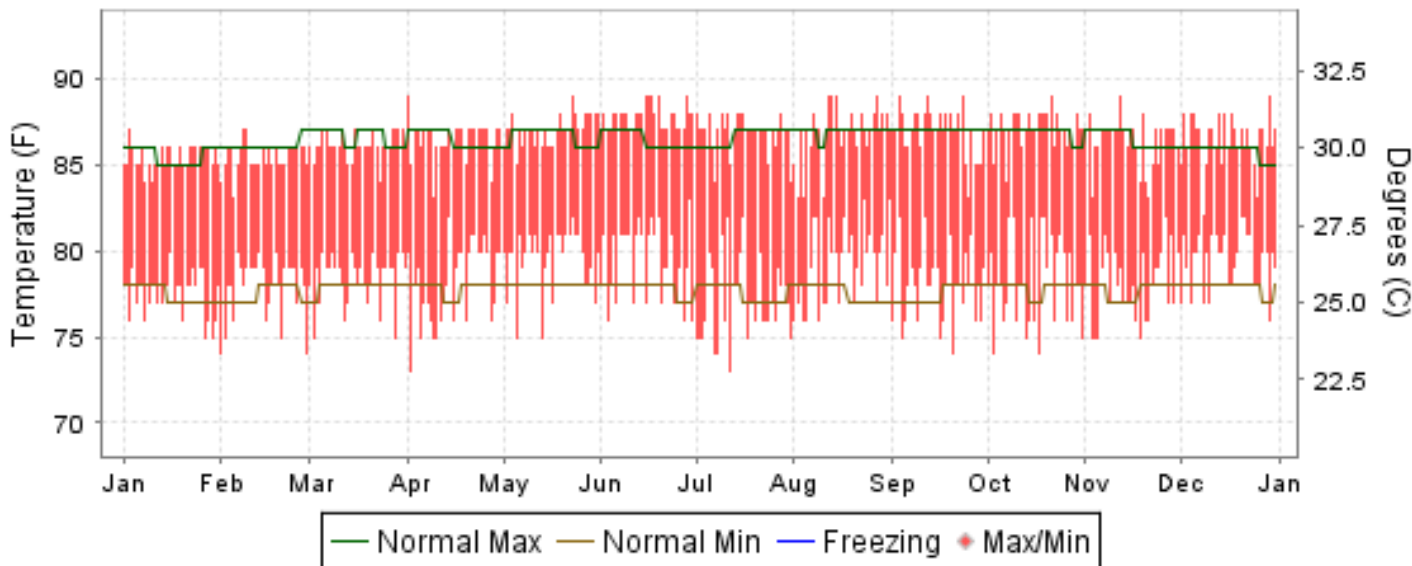


2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

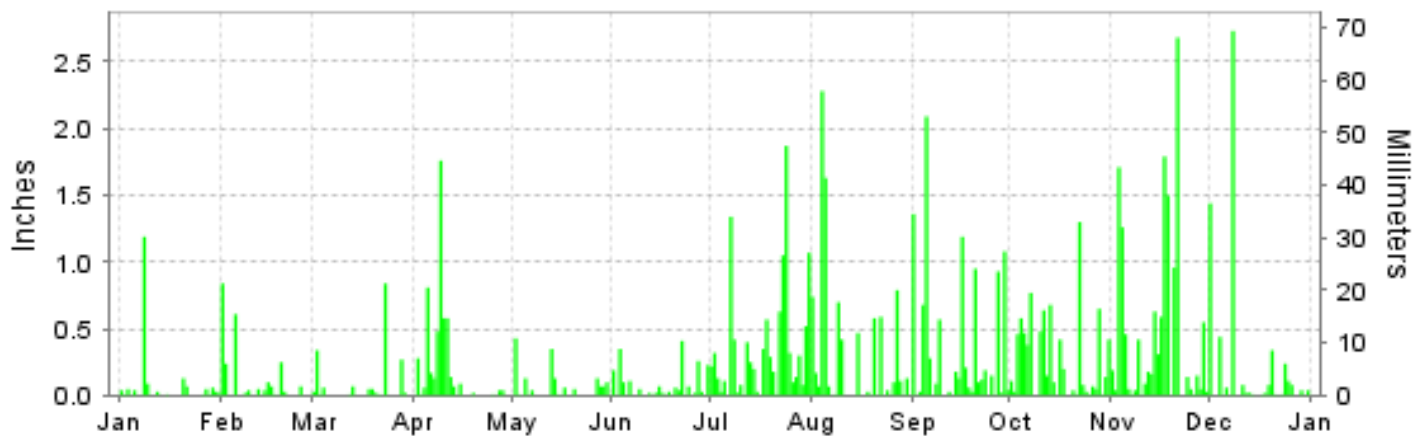
ISSN 0198-4314

KWAJALEIN, PACIFIC (PKWA)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL
OCEANIC AND
ATMOSPHERIC ADMINISTRATION

NATIONAL
ENVIRONMENTAL SATELLITE, DATA
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2009

KWAJALEIN (PKWA)

LATITUDE: 8 ° 43'N LONGITUDE: 167 ° 43'W ELEVATION (FT): GRND: 8 BARO: 11 TIME ZONE: 180 W MER (UTC -12) WBAN: 40604

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	85.5	85.5	86.1	86.5	87.0	87.8	86.9	86.9	87.0	87.2	86.4	86.5	86.6	
	HIGHEST DAILY MAXIMUM	87	87	87	89	89	89	88	89	89	89	89	86	89	
	DATE OF OCCURRENCE	03	09+	30+	01	23	28+	28+	27+	23+	21	12	29	NOV 12	
	MEAN DAILY MINIMUM	77.5	77.9	78.4	78.2	79.5	79.4	77.1	79.2	78.0	78.2	78.1	79.4	78.4	
	LOWEST DAILY MINIMUM	75	74	75	73	75	76	73	76	74	74	75	76	73	
	DATE OF OCCURRENCE	29+	28+	28+	02	13+	30+	12	09+	20	17+	18+	29	JUL 12	
	AVERAGE DRY BULB	81.5	81.7	82.3	82.4	83.3	83.6	82.0	83.1	82.5	82.7	82.3	83.0	82.5	
	MEAN WET BULB	76.0	76.5	76.9	77.8	78.3	78.9	79.4	79.1	79.4	79.4	79.2			
	MEAN DEW POINT	73.5	74.5	74.8	76.1	76.5	76.9	78.1	77.4	78.0	77.8	77.8			
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM <= 32°	0	5	0	0	6	0	0	0	0	17	0	0	0	28
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	0	0	0	
	COOLING DEGREE DAYS	519	475	544	528	575	567	534	567	533	554	524	556	6476	
RH	MEAN (PERCENT)	78	80	80	81	81	81	85	83	84	84	85	74	81	
	HOUR 00 LST	81	83	82	84	84	83	88	85	86	86	88	77	84	
	HOUR 06 LST	80	83	83	84	84	84	88	87	86	86	87	76	84	
	HOUR 12 LST	73	75	74	76	76	76	81	80	81	81	82	68	77	
	HOUR 18 LST	79	80	80	81	83	81	86	82	84	85	85	75	82	
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	0	0	0	0	0	2	4	1	2	4	4	1	18	
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.)	29.81	29.79	29.81	29.82	29.81	29.83	29.78	29.79	29.78	29.79	29.75			
	MEAN SEA-LEVEL PRESS. (IN.)	29.83	29.80	29.82	29.83	29.82	29.84	29.79	29.80	29.79	29.80	29.77			
WINDS	RESULTANT SPEED (MPH)	18.3	18.1	13.7	17.4	13.8	10.9	11.5	1.8	7.4	10.4	10.5			
	RES. DIR. (TENS OF DEGS.)	07	07	07	07	07	08	09	12	10	08	08			
	MEAN SPEED (MPH)	18.6	18.5	14.3	17.9	14.3	11.9	12.6	4.9	9.8	11.7	11.8			
	PREVAIL.DIR.(TENS OF DEGS.)	07	07	07	07	07	08	08	09	08	08	08			
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	29	30	24	32	29	28	37	21	29	30	38			
	DIR. (TENS OF DEGS.)	09	09	07	08	11	09	08	14	15	10	08			
	DATE OF OCCURRENCE	21	01	05	15	13	06	12	20	20	22	03			
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	41	46	30	39	37	36	46	33	40	38	46			
DIR. (TENS OF DEGS.)	09	09	05	09	09	14	09	09	14	09	09				
DATE OF OCCURRENCE	21	01	05	09	13	24	12	09	20	22	03				
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.84	2.37	1.78	5.27	1.58	2.08	11.03	8.93	10.51	8.28	14.05	5.78	73.50	
	GREATEST 24-HOUR (IN.)	1.21	0.84	0.84	1.91	0.43	0.41	2.92	3.91	2.09	1.30	2.74	2.73	3.91	
	DATE OF OCCURRENCE	08-09	01	23	08-09	02	22	23-24	04-05	05	22	20-21	7	AUG 04-05	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	16	13	13	17	13	18	28	18	23	26	26	19	230	
PRECIPITATION 0.10	2	5	3	9	6	7	22	13	16	17	17	5	122		
PRECIPITATION 1.00	1	0	0	1	0	0	4	2	4	1	5	2	20		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	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	
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		

NORMALS, MEANS, AND EXTREMES

KWAJALEIN (PKWA)

LATITUDE:
8 ° 43'N
LONGITUDE:
167 ° 43'W
ELEVATION (FT):
GRND: 8 BARO: 11
TIME ZONE:
180 W MER (UTC -12)
WBAN: 40604

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	85.6	86.1	86.7	86.5	86.7	86.5	86.6	86.9	87.0	86.9	86.5	85.8	86.5	
	MEAN DAILY MAXIMUM	57	85.4	85.8	86.4	86.4	86.5	86.5	86.6	87.0	87.2	87.0	86.4	85.8	86.4	
	HIGHEST DAILY MAXIMUM	57	91	92	91	92	93	92	94	95	93	97	92	90	97	
	YEAR OF OCCURRENCE		1953	1954	1954	1953	1953	1958	1953	1958	1958	1958	1953	1953	1953	OCT 1958
	MEAN OF EXTREME MAXS.	57	87.2	87.3	88.3	88.2	88.6	88.4	88.9	89.6	89.7	89.5	88.8	87.7	88.5	
	NORMAL DAILY MINIMUM	30	77.5	77.5	77.9	77.8	78.0	77.8	77.6	77.6	77.5	77.8	77.7	77.9	77.7	
	MEAN DAILY MINIMUM	57	77.6	77.7	78.0	78.0	78.1	77.9	77.7	77.8	77.8	77.9	77.8	78.0	77.9	
	LOWEST DAILY MINIMUM	57	68	71	70	71	71	71	70	71	68	71	70	69	68	
	YEAR OF OCCURRENCE		1979	1963	1985	1964	1968	2008	1954	1971	1984	1967	1975	1963	1963	SEP 1984
	MEAN OF EXTREME MINS.	57	73.9	74.2	74.1	74.3	74.4	73.9	73.8	73.9	73.8	73.7	74.1	73.9	74.0	
	NORMAL DRY BULB	30	81.6	81.8	82.3	82.2	82.4	82.2	82.1	82.3	82.3	82.4	82.1	81.9	82.1	
	MEAN DRY BULB	57	81.5	81.8	82.2	82.2	82.3	82.2	82.2	82.4	82.5	82.4	82.1	81.9	82.1	
	MEAN WET BULB	26	75.8	75.6	75.9	76.7	77.4	77.6	77.6	77.7	77.7	77.8	77.7	76.9	77.0	
	MEAN DEW POINT	26	74.2	73.7	74.1	75.0	75.8	76.2	76.3	76.3	76.2	76.3	76.2	75.3	75.5	
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	*	*	0.2	0.1	0.5	0.4	0.2	0.6	1.3	0.8	0.5	0.0	4.6	
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	512	470	536	515	538	515	529	534	518	537	513	522	6239	
RH	NORMAL (PERCENT)	30	77	75	76	78	79	81	81	80	80	80	80	79	79	
	hour 00 LST	30	80	79	79	81	83	84	83	83	83	82	83	81	82	
	hour 06 LST	30	80	79	80	82	83	84	84	84	84	83	83	81	82	
	hour 12 LST	30	72	70	70	73	75	77	77	76	76	76	76	74	74	
	hour 18 LST	30	76	74	74	77	78	79	78	78	78	79	80	78	77	
S	PERCENT POSSIBLE SUNSHINE															
W/O	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	57	0.2	0.1	0.1	0.3	0.6	0.8	1.4	1.3	1.7	1.8	1.4	0.6	10.3	
CLOUDNESS	MEAN: SUNRISE-SUNSET (OKTAS)	43	6.6	6.5	6.6	6.8	6.9	7.0	6.8	6.9	6.8	7.1	6.9	6.8	6.8	
	MIDNIGHT-MIDNIGHT (OKTAS)	33	6.7	6.4	6.5	6.6	6.9	7.0	6.9	6.9	6.8	7.2	7.0	6.7	6.8	
	MEAN NO. DAYS WITH: CLEAR	44	2.1	2.4	2.4	1.7	0.9	1.2	1.0	1.5	1.4	1.0	1.1	1.8	18.5	
	PARTLY CLOUDY	44	7.2	6.3	7.7	5.9	6.6	6.1	6.0	6.2	5.2	5.1	6.3	6.4	75.0	
	CLOUDY	44	21.4	19.6	20.9	22.7	23.4	22.9	23.4	22.6	23.0	24.4	22.0	22.2	268.5	
PR	MEAN STATION PRESSURE(IN)	26	29.78	29.79	29.80	29.80	29.81	29.80	29.80	29.79	29.79	29.78	29.76	29.77	29.79	
	MEAN SEA-LEVEL PRES. (IN)	26	29.81	29.82	29.83	29.83	29.83	29.83	29.82	29.82	29.82	29.81	29.79	29.79	29.82	
WINDS	MEAN SPEED (MPH)	26	17.2	16.4	16.2	15.5	14.2	13.4	11.4	9.5	9.0	10.0	12.5	16.8	13.5	
	PREVAIL.DIR(TENS OF DEGS)	29	06	06	06	07	07	07	07	07	07	06	07	06	06	
	MAXIMUM 2-MINUTE: SPEED (MPH)	49	55	35	39	37	44	41	41	44	44	40	60	46	60	
	DIR. (TENS OF DEGS)		02	01	09	00	01	01	00	07	00	09	01	07	01	
	YEAR OF OCCURRENCE		1969	1963	1999	1964	1967	1986	1962	2000	1995	1999	1991	2004	NOV 1991	
	MAXIMUM 3-SECOND SPEED (MPH)	26	66	48	44	47	51	51	52	67	48	53	82	64	82	
	DIR. (TENS OF DEGS)		09	09	09	09	09	14	14	09	09	04	04	09	04	
	YEAR OF OCCURRENCE		1988	1997	1999	2002	2003	1986	2008	2000	1995	1985	1991	2004	NOV 1991	
PRECIPITATION	NORMAL (IN)	30	5.12	3.73	3.82	7.63	8.62	8.86	10.24	10.42	11.82	11.46	10.74	7.94	100.40	
	MAXIMUM MONTHLY (IN)	65	15.66	10.21	24.33	20.29	26.86	19.61	22.29	23.61	21.16	20.05	19.51	30.38	30.38	
	YEAR OF OCCURRENCE		1951	1996	1951	1971	1980	1955	2002	2004	1972	1964	1957	1950	DEC 1950	
	MINIMUM MONTHLY (IN)	65	0.48	0.04	0.16	0.20	0.53	2.08	3.53	5.38	3.77	5.04	3.51	1.90	0.04	
	YEAR OF OCCURRENCE		1977	1977	1975	1983	1984	2009	1984	1981	2001	1969	1973	1971	FEB 1977	
	MAXIMUM IN 24 HOURS (IN)	65	6.46	4.60	3.81	5.41	8.35	8.86	5.68	5.35	4.69	6.53	7.24	17.15	17.15	
	YEAR OF OCCURRENCE		1979	1985	1990	1971	1980	1995	1983	1979	1972	1968	1975	1972	DEC 1972	
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	16.3	13.8	15.5	17.3	19.6	22.5	23.6	23.3	22.4	23.8	22.7	19.3	240.1	
PRECIPITATION >= 1.00	30	1.5	0.9	0.9	2.5	2.3	2.4	2.9	2.8	3.6	3.6	3.1	2.1	28.6		
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)	13	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)	65	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)	45	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 KWAJALEIN (PKWA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	8.45	2.82	1.20	8.55	26.86	9.29	13.75	13.02	14.42	11.91	9.58	4.27	124.12
1981	1.91	1.29	7.94	5.10	1.74	8.36	11.97	5.38	12.22	10.76	15.74	5.56	87.97
1982	2.16	2.20	1.93	6.50	8.88	13.60	16.14	13.73	13.55	7.10	11.10	4.28	101.17
1983	0.89	0.68	0.36	0.20	1.76	3.83	13.27	10.74	14.44	10.49	18.88	4.24	79.78
1984	3.20	4.07	1.06	2.12	0.53	3.56	3.53	7.54	7.10	8.48	11.84	6.32	59.35
1985	2.28	6.97	5.75	12.46	8.05	7.66	7.61	11.18	7.64	9.99	11.45	5.06	96.10
1986	3.12	5.64	6.87	4.82	9.37	15.08	12.43	7.53	12.43	13.48	16.36	23.28	130.41
1987	3.95	1.86	1.49	3.11	6.43	11.08	10.51	14.42	11.42	9.67	9.67	6.16	89.77
1988	5.08	0.67	1.24	5.67	3.21	5.17	7.54	5.54	16.01	16.68	11.17	8.45	86.43
1989	2.90	4.63	1.67	12.84	7.34	5.77	8.06	8.09	17.32	8.20	6.40	7.13	90.35
1990	9.32	3.36	11.00	4.40	10.75	11.61	9.25	6.36	13.28	9.14	10.15	13.08	111.70
1991	1.88	7.16	10.67	15.83	10.63	10.00	11.40	12.84	19.72	7.09	16.21	3.84	127.27
1992	4.19	0.42	0.20	0.24	3.68	6.86	13.90	7.99	11.44	7.88	14.94	8.87	80.61
1993	2.97	2.72	6.87	2.48	5.94	7.72	7.40	13.07	7.07	10.31	10.26	10.78	87.59
1994	7.06	1.54	2.64	14.94	5.75	6.93	10.25	5.41	14.23	6.72	8.13	15.99	99.59
1995	1.38	3.50	3.95	13.32	9.04	14.78	9.80	11.49	12.38	16.53	7.72	5.92	109.81
1996	11.28	10.21	2.06	5.94	9.83	6.86	4.81	6.39	10.97	7.68	11.40	11.18	98.61
1997	7.89	2.57	8.92	11.17	18.45	9.77	5.10	23.38	9.29	15.51	5.83	5.07	122.95
1998	0.66	0.91	0.75	0.72	0.87	3.86	12.63	11.18	9.04	14.69	7.95	5.85	69.11
1999	4.55	3.82	1.84	2.18	3.58	12.34	10.61	8.93	8.84	11.95	10.95	6.75	86.34
2000	13.42	8.13	3.87	2.33	3.15	4.04	9.94	12.46	9.03	13.85	6.75	11.05	98.02
2001	3.53	1.75	1.13	2.17	4.68	4.63	7.73	9.27	3.77	15.52	13.70	7.96	75.84
2002	1.31	3.24	5.50	7.72	11.97	11.61	22.29	12.14	6.95	12.10	3.80	6.38	105.01
2003	2.75	2.36	2.08	12.14	10.57	6.58	10.03	10.54	10.36	14.03	4.14	11.78	97.36
2004	0.80	4.63	3.32	6.92	7.01	6.92	7.20	23.61	8.40	9.74	12.84	11.54	102.93
2005	3.42	1.41	1.26	3.12	2.68	6.49	8.57	7.32	8.03	16.86	12.33	4.70	76.19
2006	5.06	1.15	3.09	5.81	11.54	7.06	7.91	10.21	12.32	19.91	13.02	6.57	103.65
2007	0.77	3.43	1.39	11.06	8.75	5.00	5.74	11.92	11.39	11.59	12.43	5.76	89.23
2008	5.35	5.46	3.36	5.24	7.63	5.34	11.62	6.83	9.20	11.89	5.85	7.45	85.22
2009	1.84	2.37	1.78	5.27	1.58	2.08	11.03	8.93	10.51	8.28	14.05	5.78	73.50
POR= 57 YRS	4.23	3.18	4.10	7.03	9.05	8.93	10.08	10.42	10.97	11.91	10.92	8.01	98.83

WBAN : 40604

AVERAGE TEMPERATURE (°F) 2009 KWAJALEIN (PKWA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	81.9	82.0	83.3	82.0	81.4	82.4	82.3	82.9	82.3	82.8	82.0	82.5	82.3
1981	82.3	82.3	82.3	82.3	83.3	82.2	81.9	82.6	81.9	83.0	82.2	81.9	82.4
1982	81.6	82.1	82.6	82.7	82.5	82.4	81.8	82.3	81.8	82.3	82.7	80.9	82.1
1983	80.1	81.1	82.0	82.7	83.6	83.5	82.6	82.4	82.2	82.5	81.5	82.1	82.2
1984	82.0	82.2	83.0	83.1	83.6	82.9	82.7	81.8	82.3	82.6	82.0	82.5	82.6
1985	82.2	82.7	82.0	81.4	82.2	82.0	82.2	81.9	82.8	82.9	82.0	82.2	82.2
1986	82.1	82.2	82.1	82.6	82.2	82.3	82.5	83.0	82.1	82.7	82.0	81.5	82.3
1987	81.1	81.1	82.1	82.5	82.9	82.5	82.7	83.1	82.9	83.7	82.9	82.2	82.5
1988	81.7	82.6	83.0	83.1	83.6	82.6	82.3	83.1	82.2	81.9	82.2	81.5	82.5
1989	82.0	82.1	82.8	82.2	82.1	82.2	82.5	82.6	82.4	82.5	82.9	83.0	82.4
1990	82.2	82.2	82.2	83.5	82.3	82.9	82.9	83.3	82.6	83.2	83.3	82.4	82.8
1991	82.6	82.5	81.8	81.6	82.6	82.5	82.3	82.7	82.7	82.8	81.9	81.6	82.3
1992	80.8	81.2	81.8	82.7	82.8	82.5	82.2	83.0	83.5	83.4	81.8	81.7	82.3
1993	81.1	81.5	81.7	82.3	82.5	82.9	82.9	82.5	83.1	83.2	82.4	82.1	82.4
1994	82.0	82.2	82.2	81.9	83.0	82.3	82.1	82.9	83.1	83.3	83.3	82.2	82.5
1995	82.1	81.9	82.6	81.8	82.7	82.4	81.9	82.3	82.3	81.1	81.5	82.4	82.1
1996	82.3	82.0	82.9	82.6	82.4	82.1	82.7	82.9	83.1	83.3	82.4	81.6	82.5
1997	81.7	82.2	82.1	82.2	82.1	82.2	83.5	81.8	82.4	82.2	82.6	81.7	82.2
1998	80.8	81.0	81.8	82.7	83.4	82.6	81.1	81.8	82.1	81.9	81.9	81.4	81.9
1999	81.6	81.5	81.9	82.3	82.5	81.1	80.8	81.3	81.1	81.6	80.5	81.2	81.5
2000	80.5	81.1	81.6	82.3	82.4	81.8	81.2	81.0	82.3	81.7	82.0	81.7	81.6
2001	81.0	81.5	82.7	83.3	82.7	82.6	82.5	82.9	83.2	83.1	82.1	82.7	82.5
2002	82.8	81.9	82.3	83.8	83.9	83.6	82.6	82.4	83.6	82.9	83.5	82.6	83.0
2003	82.1	82.6	83.1	81.6	83.0	83.1	83.3	83.6	83.5	82.9	83.9	83.1	83.0
2004	83.3	83.4	83.8	83.3	83.4	83.1	83.2	82.7	84.0	83.8	83.9	83.0	83.4
2005	82.4	82.6	83.3	83.7	84.0	83.1	83.1	83.5	83.4	83.3	83.4	82.6	83.2
2006	82.0	82.2	82.1	83.0	82.5	82.9	83.0	83.1	83.3	82.5	82.5	82.8	82.7
2007	82.8	82.5	83.6	82.6	82.9	82.7	82.8	82.6	82.6	82.5	81.8	82.4	82.7
2008	81.8	81.7	81.9	81.8	81.0	80.9	80.6	82.3	82.2	82.1	82.5	81.1	81.7
2009	81.5	81.7	82.3	82.4	83.3	83.6	82.0	83.1	82.5	82.7	82.3	83.0	82.5
POR= 57 YRS	81.5	81.8	82.2	82.2	82.3	82.2	82.2	82.4	82.5	82.4	82.1	81.9	82.1

HEATING DEGREE DAYS (base 65°F) 2009 KWAJALEIN (PKWA)

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

WBAN : 40604

COOLING DEGREE DAYS (base 65°F) 2009 KWAJALEIN (PKWA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	528	501	576	515	517	529	542	557	526	560	519	551	6421
1981	545	491	541	527	573	525	532	551	515	565	523	530	6418
1982	521	486	554	535	548	528	530	544	513	541	535	498	6333
1983	478	454	531	538	582	561	552	546	521	548	502	535	6348
1984	535	504	565	551	582	546	557	526	527	554	518	549	6514
1985	541	500	533	501	542	513	542	529	540	564	516	539	6360
1986	539	488	537	536	542	524	550	564	519	558	516	516	6389
1987	507	458	540	530	559	530	557	569	541	585	542	540	6458
1988	526	516	565	551	584	535	545	568	521	529	525	519	6484
1989	532	482	559	520	535	527	549	554	529	550	544	567	6448
1990	538	490	539	561	542	545	561	575	533	572	555	545	6556
1991	553	495	528	505	552	533	546	556	535	556	515	521	6395
1992	494	477	526	535	558	532	541	565	562	577	514	524	6405
1993	507	468	522	524	548	542	562	552	548	571	529	541	6414
1994	532	487	543	514	566	524	537	562	550	573	555	540	6483
1995	534	480	551	509	557	528	532	542	526	503	502	544	6308
1996	541	497	560	535	550	521	557	563	551	572	531	526	6504
1997	527	486	537	523	537	525	578	527	530	541	532	524	6367
1998	497	455	530	540	578	534	505	528	520	533	515	518	6253
1999	522	469	530	527	551	488	500	510	492	519	472	512	6092
2000	488	475	522	522	545	511	507	504	529	525	516	522	6166
2001	501	469	555	554	558	536	554	560	553	568	518	558	6484
2002	559	479	545	572	593	564	553	545	566	564	559	552	6651
2003	537	497	571	506	568	549	573	584	561	563	572	569	6650
2004	574	538	594	554	577	553	573	554	577	590	573	562	6819
2005	545	501	575	567	597	551	569	582	559	577	561	554	6738
2006	534	487	536	546	548	542	566	569	558	551	532	556	6525
2007	558	496	584	535	562	539	563	552	534	549	510	548	6530
2008	529	490	530	512	501	483	494	541	522	537	531	507	6177
2009	519	475	544	528	575	567	534	567	533	554	524	556	6476

SNOWFALL (inches) 2009 KWAJALEIN (PKWA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	0.0	0.0	0.0	0.0	0.0	0.0
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POR= 58 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 : 40604

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.</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> <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 KWAJALEIN PACIFIC (PKWA)

Kwajalein Island, although only 3 miles in length and 1/2 mile wide, is the largest of the fringing reef islands composing Kwajalein Atoll. Kwajalein Atoll, spanning some 70 miles, is one of the largest coral atolls in the world. The land surface of the island, which has very little effect on the climate of the locality, has an average elevation of less than 10 feet above sea level. The highest points on the island are 12 to 15 feet above sea level.

Kwajalein, located less than 700 miles north of the equator, has a tropical marine climate characterized by relatively high annual rainfall and warm to hot, humid weather throughout the year.

Temperatures are very uniform from day to day and month to month. Because of the low latitude, there are only slight seasonal variations in the length of daylight period and the altitude of the sun at Kwajalein. As a result, the variation of the amount of solar energy received is small. The small variation in solar energy and the marine influence are the principal reasons for the uniform temperatures in the area. The range of normal temperature between the coldest month and the warmest month averages about 2 degrees.

The principal rainfall season extends from May through November. Light, easterly winds, almost constant cloudiness, and frequent moderate to heavy showers prevail during the wet season.

The dry season includes the period December through April, and is characterized not so much by lack of showers as by light showers of short duration. In this season the trade winds are persistent, blowing from the northeast 15 to 20 knots almost continuously. Cloudiness is at a minimum, and the sky is less than one-half covered most of the time, but clear skies are rare.

Severe storms with attendant damaging winds are rare in the vicinity of Kwajalein. During the wet season, however, small, weak depressions may form near the island. Some of these intensify and a few eventually develop into typhoons after moving westward away from the island. These depressions cause heavy rainfall in the Kwajalein Atoll.

The relative humidity is uniformly high throughout the year, and is slightly higher in the wet season than in the dry season. The combination of high humidity and proximity of the salt water ocean presents a corrosion problem.

Station Location

KWAJALEIN

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	Latitude		Longitude		ELEVATION ABOVE								REMARKS		
				NORTH	EAST	SEA LEVEL	GROUND							AUTOMATIC OBSERVING EQUIPMENT *				
						GROUND TEMPERATURE SITE	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE		HYGROTHERMOMETER			
U.S. Army	2/17/44	4/15/52		8° 43'	167° 44'	7												
U.S. Navy	4/15/52	11/02/54	Unknown	8° 44'	167° 43'	7												
U.S. Navy	11/03/54	6/30/60	1-1/4 mi NE	8° 44'	167° 44'	10	62		26						22			
Bucholz AP Bldg. #9	7/01/60	Present	3/4 mi. SW	8° 44'	167° 44'	8	25 19	5 b5	5 b5			d2		2 c2				a. Effective 6/23/69. b. Moved 75' NNE 8/2/80. c. Moved 16' SW 8/2/80. d. Installed 15' s of inst. shelter 8/2/80.

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

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