

PONAPE ISLAND	KA	
Latitude = 6.97 N		WMO No. 913480
Longitude = 158.22 E		Elevation = 151 feet
Period of Record = 1973 to 1996		Average Pressure = 29.61 inches Hg

Design Criteria Data

	Design Value	Mean Coincident (Average) Values			
		Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Dry Bulb Temperature (T)	(°F)				
Median of Extreme Highs	90	80	142	6.7	W
0.4% Occurrence	89	79	139	6.8	E
1.0% Occurrence	88	79	138	7.0	E
2.0% Occurrence	88	79	138	7.0	E
Mean Daily Range	8	-	-	-	-
97.5% Occurrence	74	74	125	4.4	SSE
99.0% Occurrence	73	73	121	4.3	SE
99.6% Occurrence	73	73	121	4.3	SE
Median of Extreme Lows	71	71	113	4.5	SSE
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Wet Bulb Temperature (T_{wb})	(°F)				
Median of Extreme Highs	84	89	167	6.6	WNW
0.4% Occurrence	81	87	147	6.6	E
1.0% Occurrence	81	87	147	6.6	E
2.0% Occurrence	80	85	143	6.7	E
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Humidity Ratio (HR)	(gr/lb)				
Median of Extreme Highs	180	89	1.17	5.8	E
0.4% Occurrence	153	85	1.00	5.9	E
1.0% Occurrence	152	85	1.00	6.2	ENE
2.0% Occurrence	148	84	0.97	6.1	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	3989	6241	6362

Other Site Data

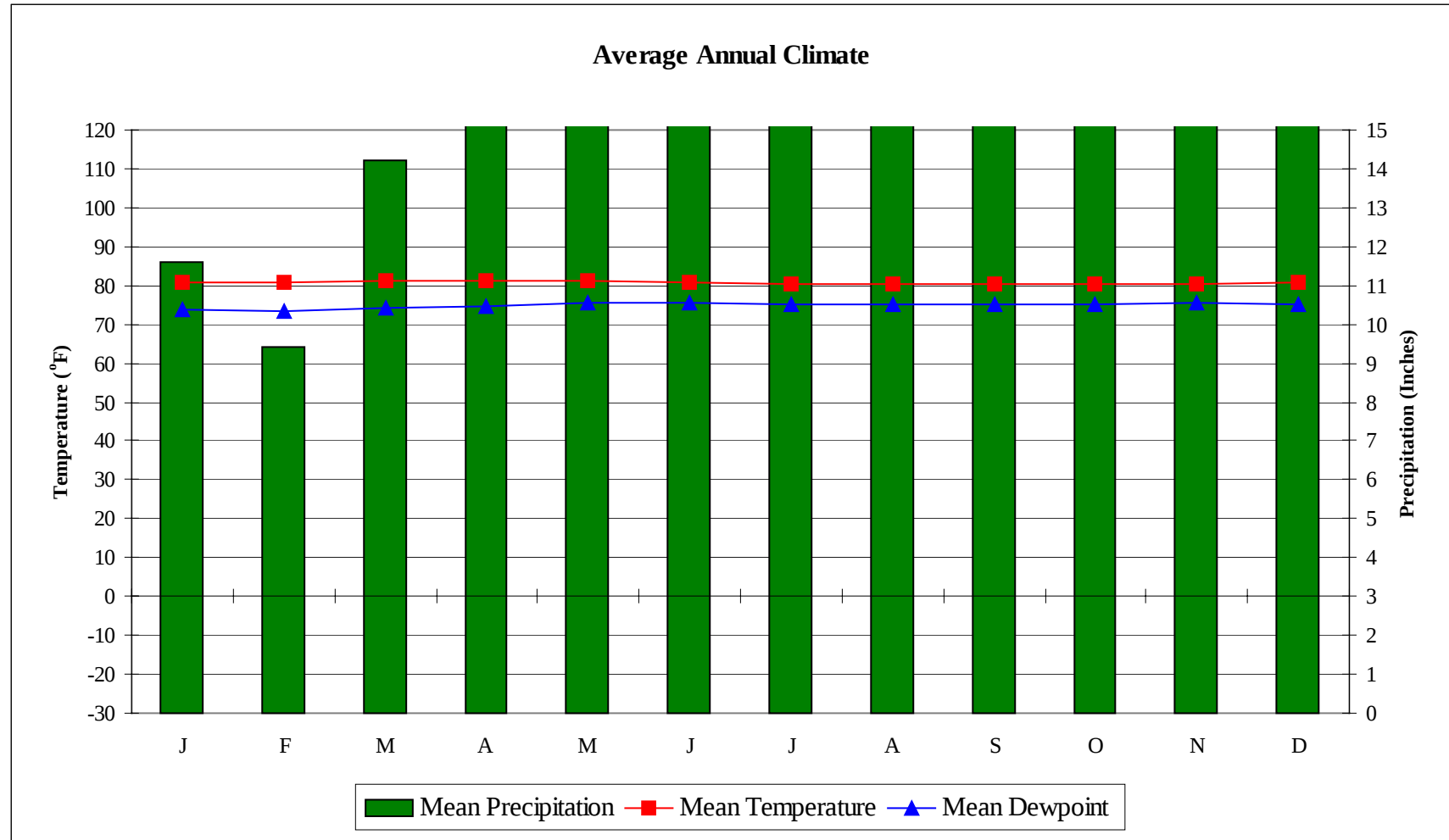
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
10	N/A	N/A	13.1 + 4.7
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
83.2	N/A	N/A	0

*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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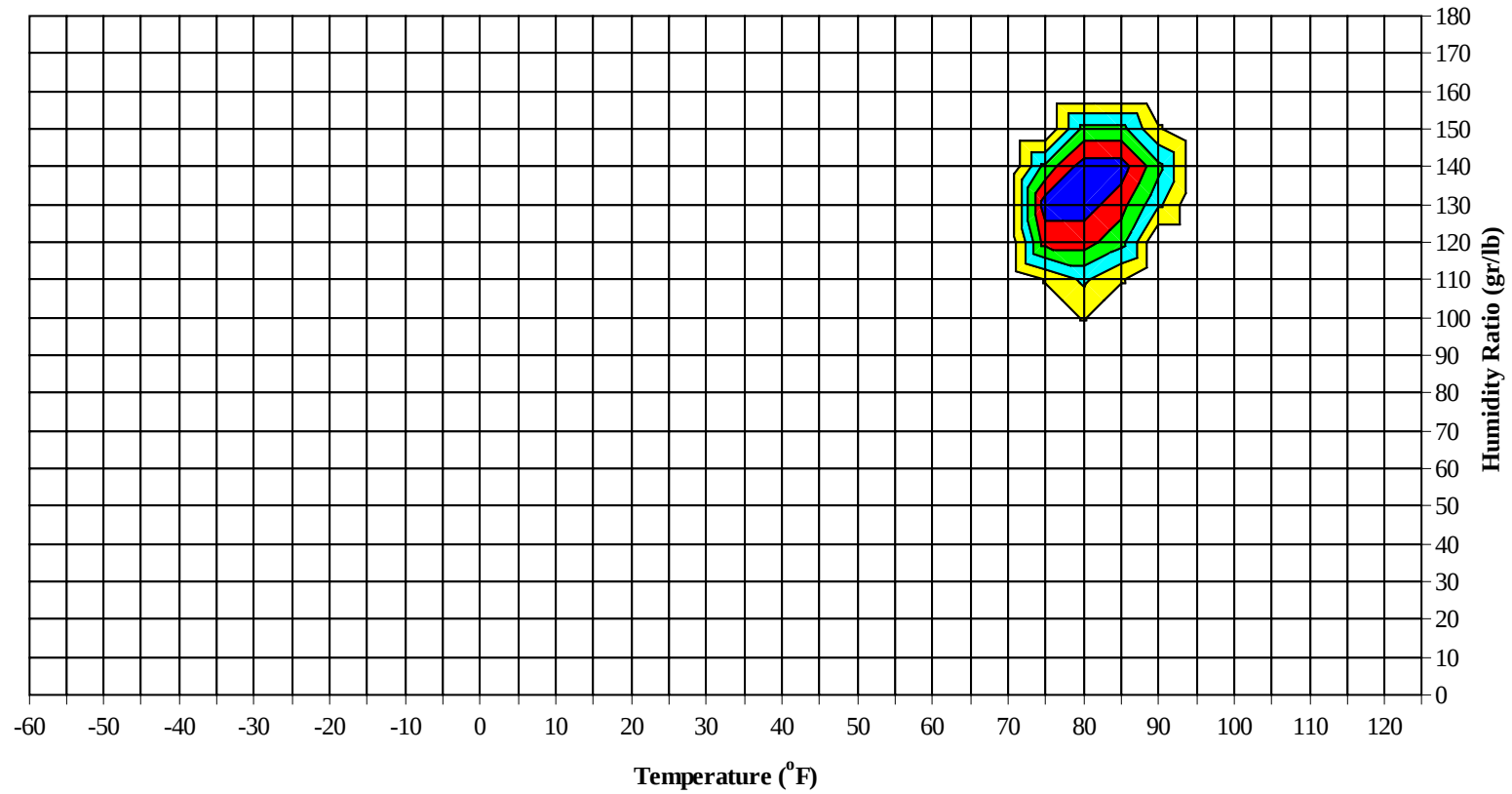


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Long Term Psychrometric Summary



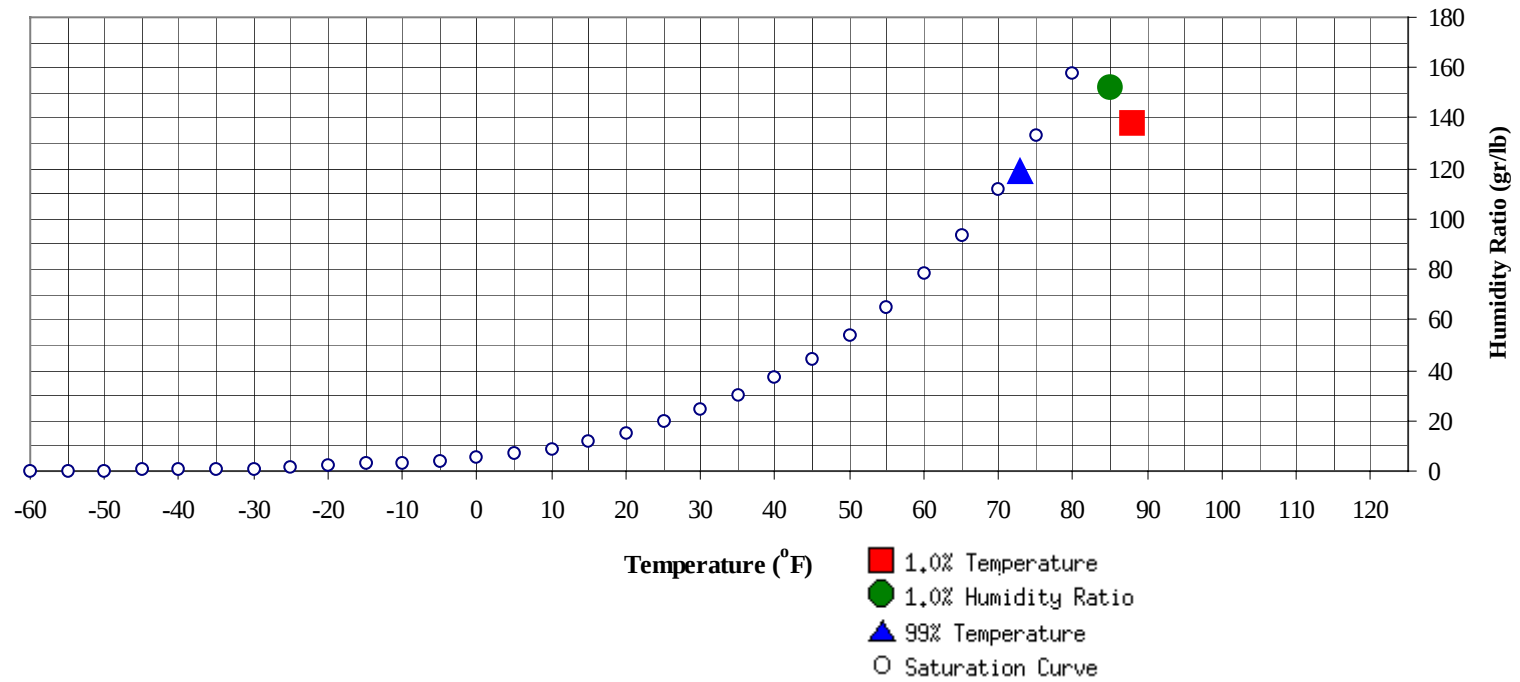
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



99% Dry Bulb	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
	73	119.1	36.1		151.9	85.1	80.5	78.9	44.3

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	88	138.2	79.3	42.8

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Period of Record = 1973 to 1996

[illegible]

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

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Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	April					May					June				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
95 / 99												0		0	
90 / 94		0		0	81.3		1		1	80.3	0	1		1	79.6
85 / 89	0	114	7	120	78.0	0	125	9	134	78.7	1	113	8	123	78.9
80 / 84	119	101	156	375	76.7	112	91	150	353	77.2	83	94	120	296	77.4
75 / 79	110	26	74	210	75.5	125	30	86	241	75.6	134	32	108	274	75.5
70 / 74	12	0	3	15	72.7	11	1	2	15	72.9	21	1	3	26	72.6
65 / 69											0			0	57.0

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

WMO No. 913480

Period of Record = 1973 to 1996

[illegible]

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

WMO No. 913480

Period of Record = 1973 to 1996

[illegible]

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WMO No. 913480

Period of Record = 1973 to 1996

[illegible]

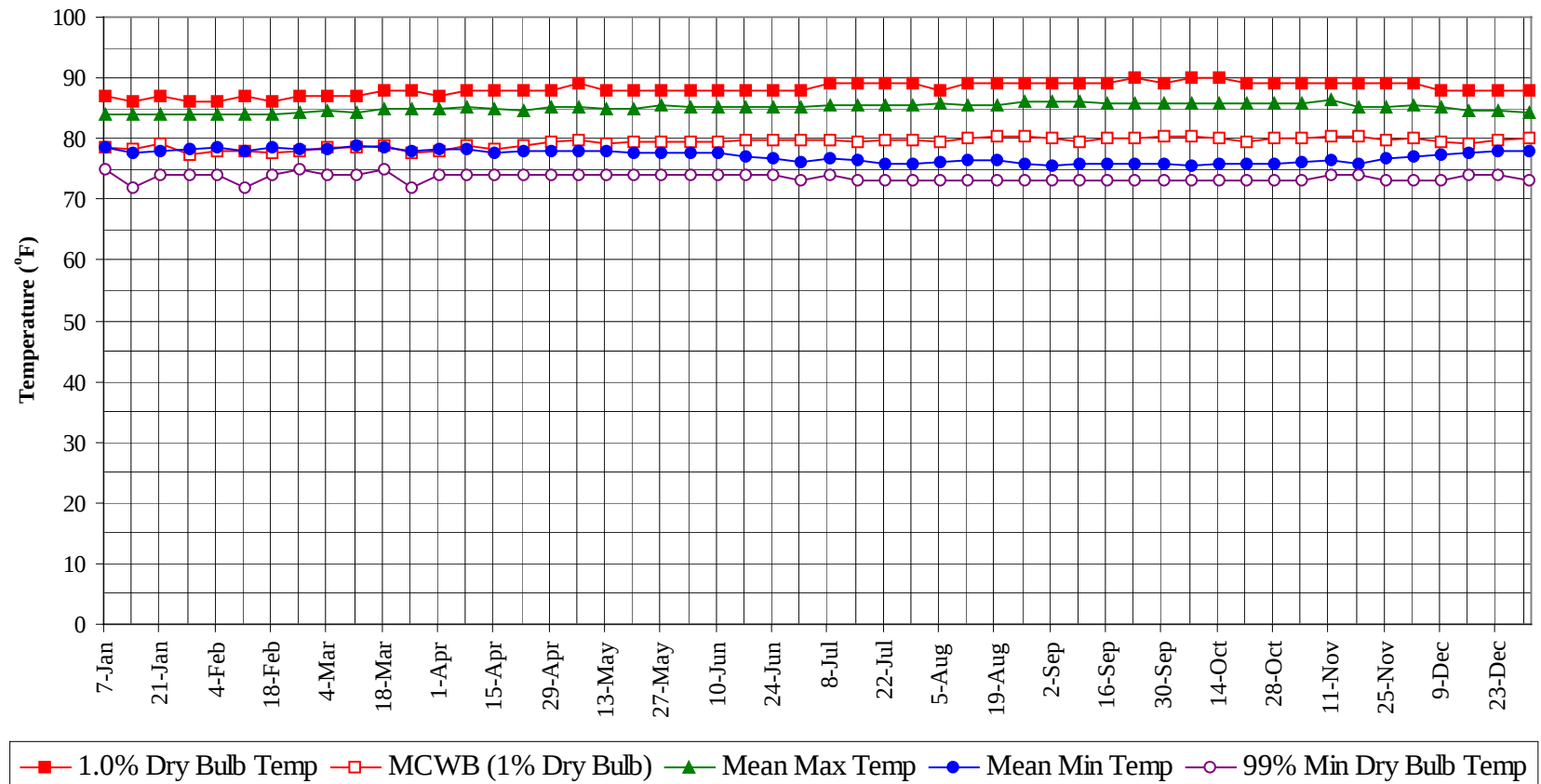
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

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Annual Summary of Temperatures

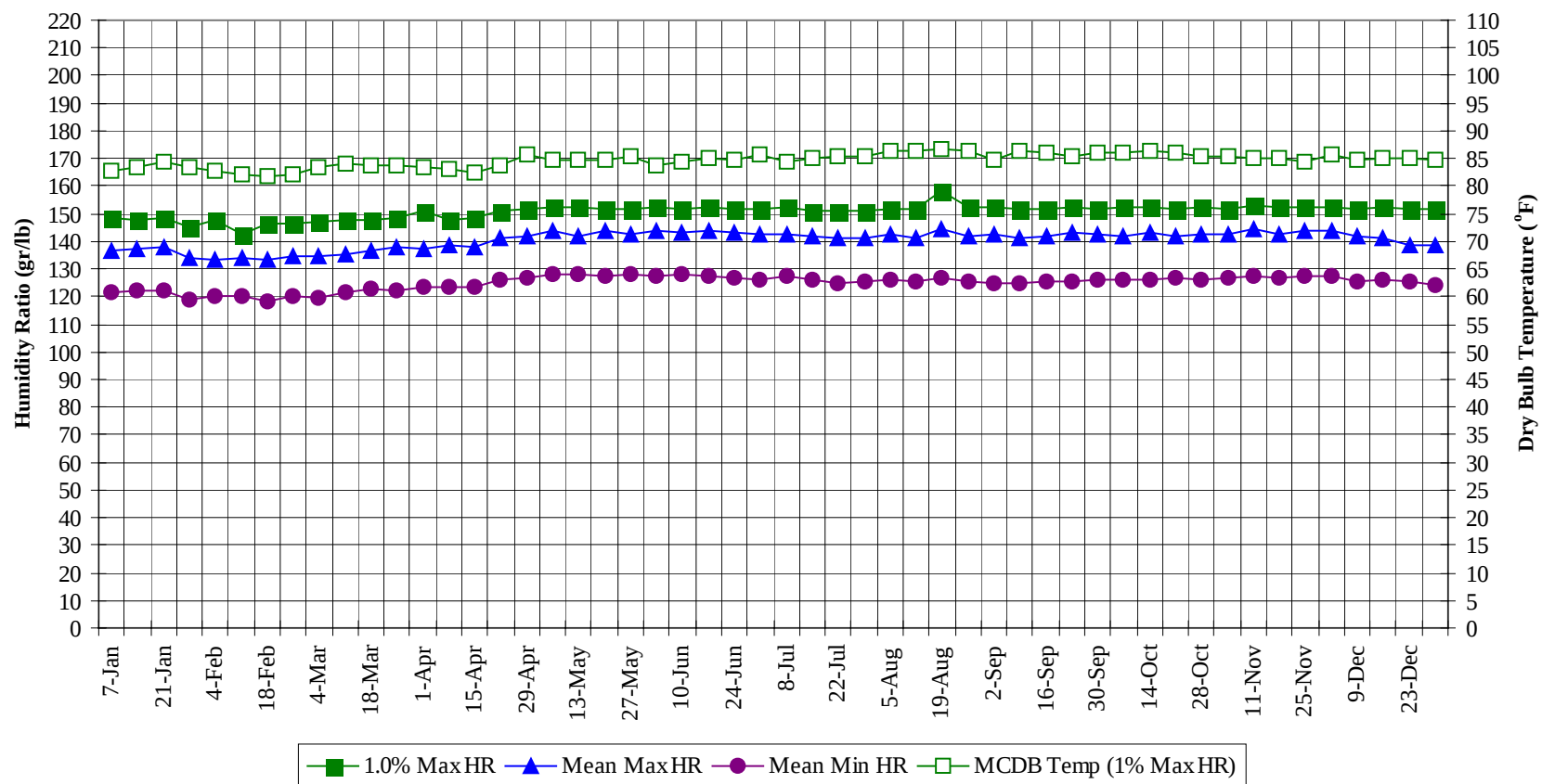


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Long Term Humidity and Dry Bulb Temperature Summary



PONAPE ISLAND**KA****WMO No. 913480****Long Term Dry Bulb Temperature and Humidity Summary**

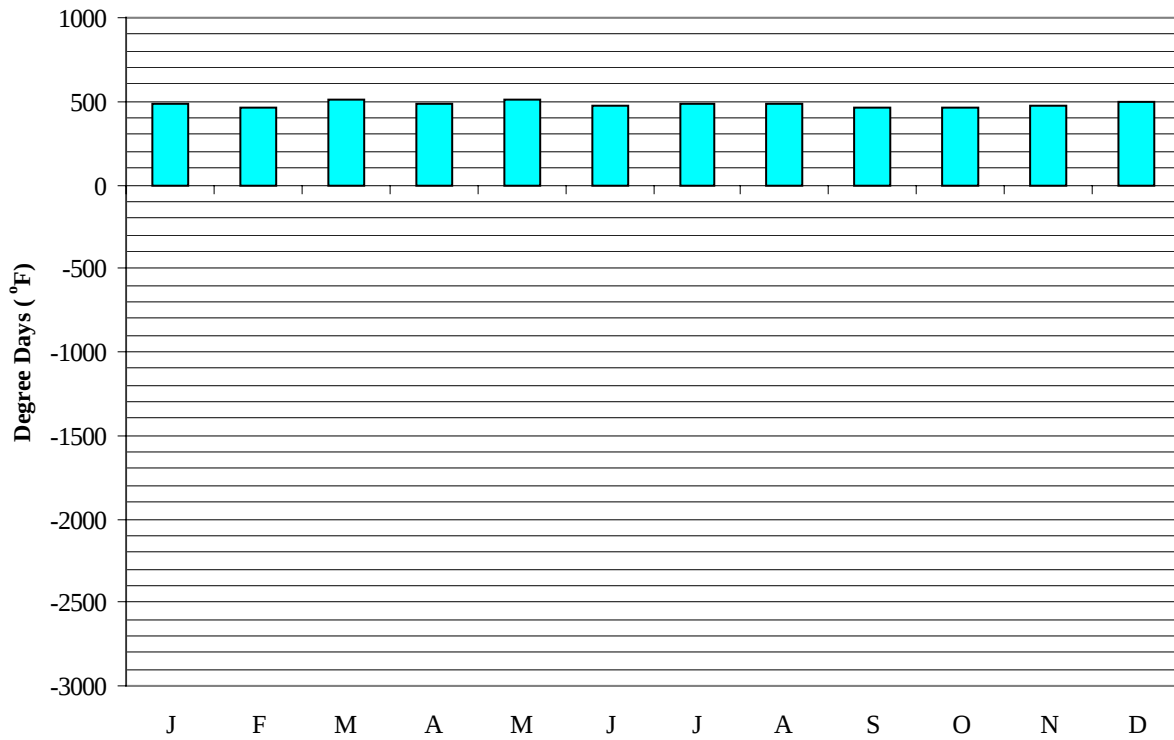
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	87.0	78.5	84.0	78.7	75.0	148.4	82.8	136.4	121.3
14-Jan	86.0	78.3	84.1	77.5	72.0	147.7	83.4	136.9	122.2
21-Jan	87.0	79.2	84.0	78.0	74.0	148.4	84.5	137.8	122.1
28-Jan	86.0	77.4	84.0	78.3	74.0	144.9	83.3	133.9	118.7
4-Feb	86.0	77.8	84.0	78.4	74.0	147.7	82.9	133.1	120.1
11-Feb	87.0	78.0	84.0	78.1	72.0	142.8	82.0	134.1	119.9
18-Feb	86.0	77.6	83.9	78.4	74.0	146.3	81.9	133.3	118.5
25-Feb	87.0	78.0	84.4	78.2	75.0	146.3	82.2	134.3	120.2
4-Mar	87.0	78.4	84.7	78.4	74.0	147.0	83.5	134.6	119.4
11-Mar	87.0	78.6	84.4	78.8	74.0	147.7	84.0	135.0	121.6
18-Mar	88.0	78.8	84.8	78.7	75.0	147.7	83.7	136.9	122.8
25-Mar	88.0	77.8	84.9	78.0	72.0	148.4	83.9	137.8	122.3
1-Apr	87.0	78.0	84.9	78.1	74.0	151.2	83.3	137.5	123.5
8-Apr	88.0	78.8	85.1	78.1	74.0	147.7	83.1	138.5	123.6
15-Apr	88.0	78.2	84.8	77.6	74.0	148.4	82.6	138.2	123.8
22-Apr	88.0	79.0	84.5	78.0	74.0	151.2	83.6	140.9	125.8
29-Apr	88.0	79.5	85.1	77.9	74.0	151.9	85.6	141.8	127.1
6-May	89.0	79.9	85.3	77.9	74.0	152.6	84.8	143.6	128.3
13-May	88.0	79.2	85.0	78.0	74.0	152.6	84.6	141.6	128.1
20-May	88.0	79.4	85.0	77.6	74.0	151.9	84.6	143.9	127.5
27-May	88.0	79.4	85.6	77.7	74.0	151.9	85.4	142.8	128.3
3-Jun	88.0	79.5	85.2	77.5	74.0	152.6	83.6	144.1	127.7
10-Jun	88.0	79.3	85.1	77.6	74.0	151.9	84.6	142.9	128.1
17-Jun	88.0	79.8	85.3	77.1	74.0	152.6	85.2	143.8	127.3
24-Jun	88.0	79.7	85.1	76.8	74.0	151.9	84.9	143.0	126.6
1-Jul	88.0	79.7	85.3	76.0	73.0	151.9	85.7	142.6	125.9
8-Jul	89.0	79.6	85.6	76.7	74.0	152.6	84.3	142.3	127.2
15-Jul	89.0	79.3	85.6	76.4	73.0	151.2	85.1	141.8	126.3
22-Jul	89.0	79.7	85.4	76.0	73.0	151.2	85.3	141.1	124.7
29-Jul	89.0	79.7	85.5	75.9	73.0	151.2	85.2	141.4	125.2
5-Aug	88.0	79.3	85.9	76.1	73.0	151.9	86.3	142.8	126.0
12-Aug	89.0	79.9	85.5	76.6	73.0	151.9	86.5	141.3	125.6
19-Aug	89.0	80.3	85.6	76.5	73.0	158.2	86.7	144.3	126.7
26-Aug	89.0	80.4	86.0	75.9	73.0	152.6	86.3	142.0	125.5
2-Sep	89.0	80.0	86.1	75.5	73.0	152.6	84.7	142.3	124.8
9-Sep	89.0	79.5	86.0	75.7	73.0	151.9	86.2	141.0	124.8
16-Sep	89.0	80.2	85.8	75.8	73.0	151.9	86.0	142.1	125.3
23-Sep	90.0	80.0	85.7	75.8	73.0	152.6	85.3	143.1	125.2
30-Sep	89.0	80.3	85.8	75.8	73.0	151.9	86.0	142.2	126.1
7-Oct	90.0	80.3	85.7	75.6	73.0	152.6	85.9	142.1	126.0
14-Oct	90.0	80.0	85.7	75.9	73.0	152.6	86.4	142.9	125.8
21-Oct	89.0	79.4	85.9	76.0	73.0	151.9	86.0	142.1	126.6
28-Oct	89.0	80.0	85.9	75.9	73.0	152.6	85.3	142.7	126.3
4-Nov	89.0	80.0	85.7	76.1	73.0	151.9	85.3	142.8	126.6
11-Nov	89.0	80.4	86.3	76.6	74.0	153.3	85.1	144.4	127.7
18-Nov	89.0	80.4	85.3	75.9	74.0	152.6	85.0	142.8	126.6
25-Nov	89.0	79.8	85.2	76.7	73.0	152.6	84.3	143.7	127.4
2-Dec	89.0	80.1	85.5	77.1	73.0	152.6	85.8	144.0	127.1
9-Dec	88.0	79.6	85.3	77.4	73.0	151.9	84.7	141.9	125.6
16-Dec	88.0	79.1	84.5	77.7	74.0	152.6	84.9	141.2	125.8
23-Dec	88.0	79.9	84.7	77.8	74.0	151.9	85.1	138.5	125.4
31-Dec	88.0	80.0	84.4	77.9	73.0	151.9	84.7	138.9	124.0

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Degree Days, Heating and Cooling
(Base 65°F)



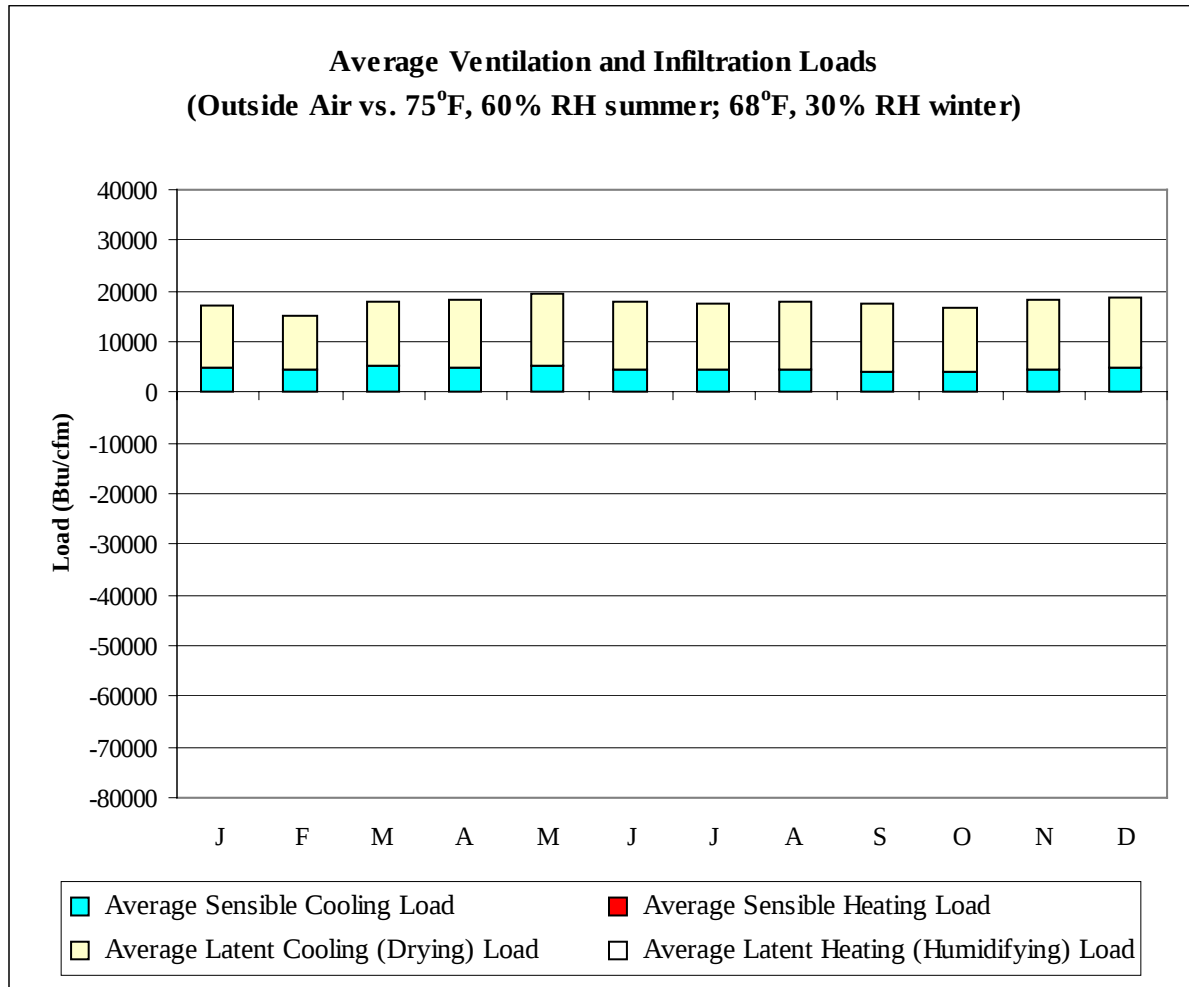
■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	491	0
FEB	456	0
MAR	510	0
APR	490	0
MAY	505	0
JUN	473	0
JUL	481	0
AUG	484	0
SEP	461	0
OCT	461	0
NOV	475	0
DEC	497	0
ANN	5783	0

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	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	4773	0	12484	0
FEB	4492	0	10742	0
MAR	5189	0	12706	0
APR	4924	0	13170	0
MAY	5093	0	14193	0
JUN	4567	0	13490	0
JUL	4503	0	13105	0
AUG	4555	0	13276	0
SEP	4242	0	13319	0
OCT	4235	0	12658	0
NOV	4500	0	13609	0
DEC	4922	0	13958	0
ANN	55995	0	156710	0

Average Annual Solar Radiation – Nearest Available Site
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

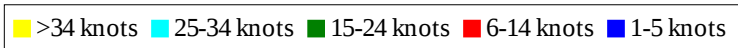
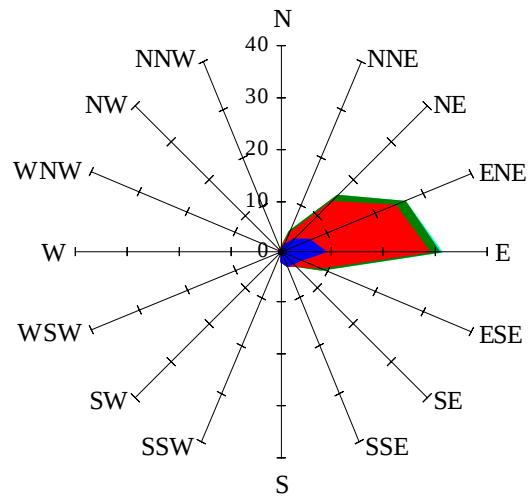


Average Annual Solar Heat and Illumination – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

Wind Summary - December, January, and February

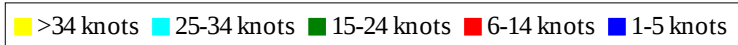
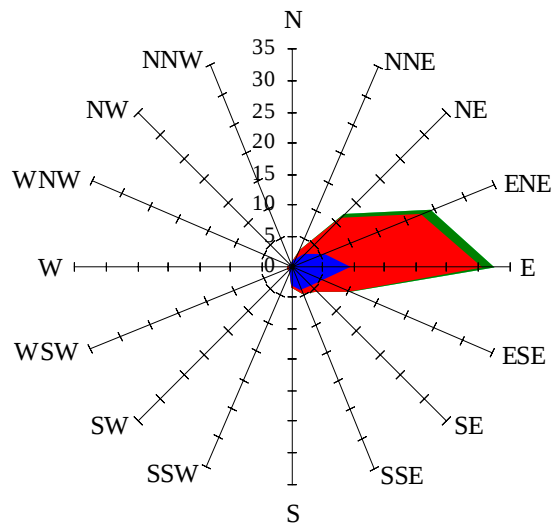
Labels of Percent Frequency on North Axis



Percent Calm = 1.25

Wind Summary - March, April, and May

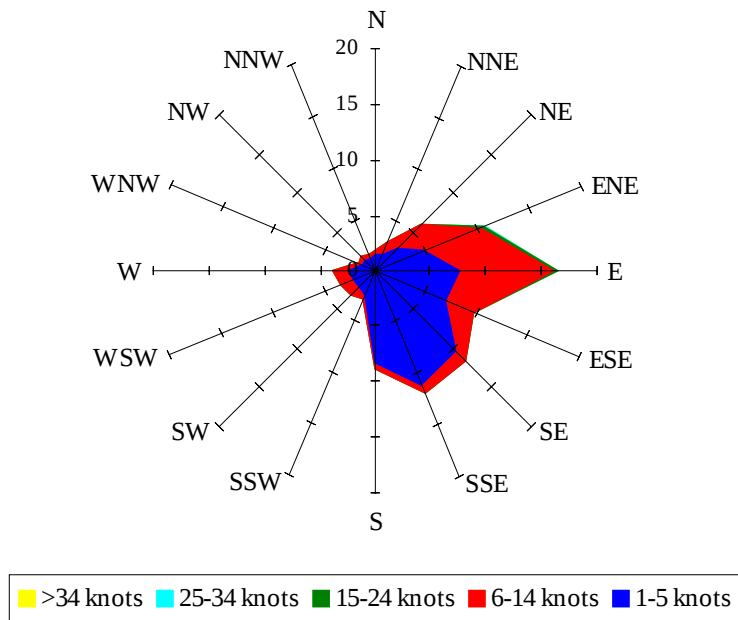
Labels of Percent Frequency on North Axis



Percent Calm = 1.59

Wind Summary - June, July, and August

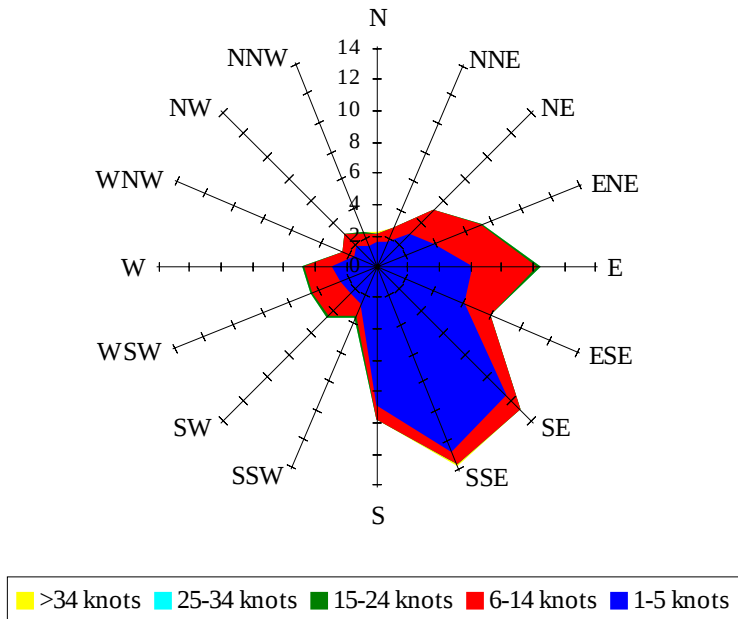
Labels of Percent Frequency on North Axis



Percent Calm = 2.72

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 3.83