

PORT HARDY CN

Latitude = 50.68 N

Longitude = 127.30 W

Period of Record = 1973 to 1996

WMO No. 711090

Elevation = 72 feet

Average Pressure = 29.89 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	75	62	61	9.2	NW
0.4% Occurrence	68	59	61	9.5	NNW
1.0% Occurrence	65	58	60	9.7	NNW
2.0% Occurrence	63	57	59	9.5	NNW
Mean Daily Range	11	-	-	-	-
97.5% Occurrence	30	29	21	4.9	S
99.0% Occurrence	27	26	18	5.1	S
99.6% Occurrence	23	21	13	6.0	S
Median of Extreme Lows	18	17	11	5.5	S
	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	64	71	74	8.0	N
0.4% Occurrence	60	64	68	7.3	N
1.0% Occurrence	59	63	66	7.0	N
2.0% Occurrence	58	62	64	7.0	NNW
	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	80	65	0.54	6.0	N
0.4% Occurrence	71	61	0.48	5.4	ESE
1.0% Occurrence	69	61	0.47	5.2	N
2.0% Occurrence	66	59	0.44	5.1	N
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	0	0	0

Other Site Data

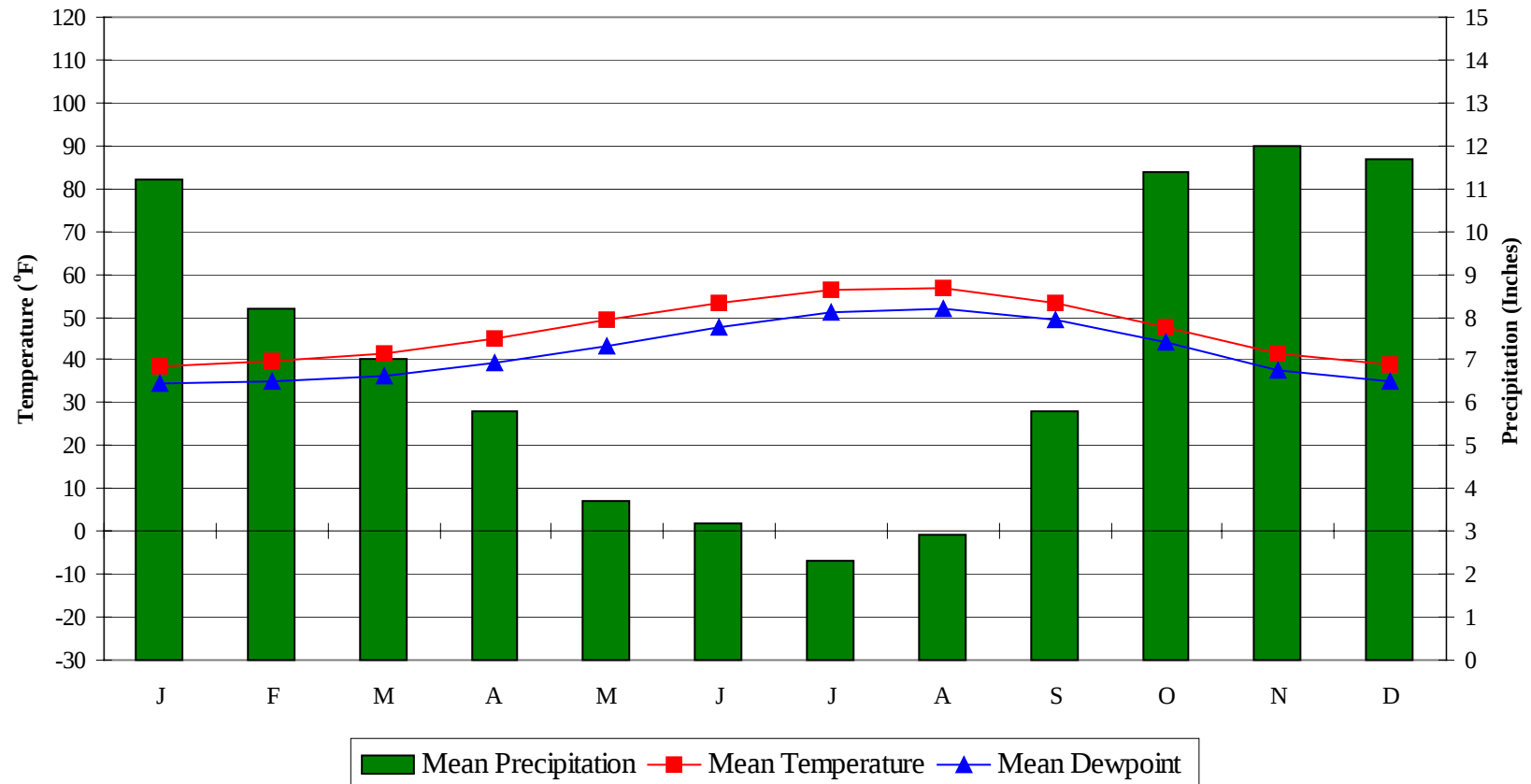
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	N/A	N/A	0.0 + 0.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
49.4	N/A	N/A	32

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

PORT HARDY CN

WMO No. 711090

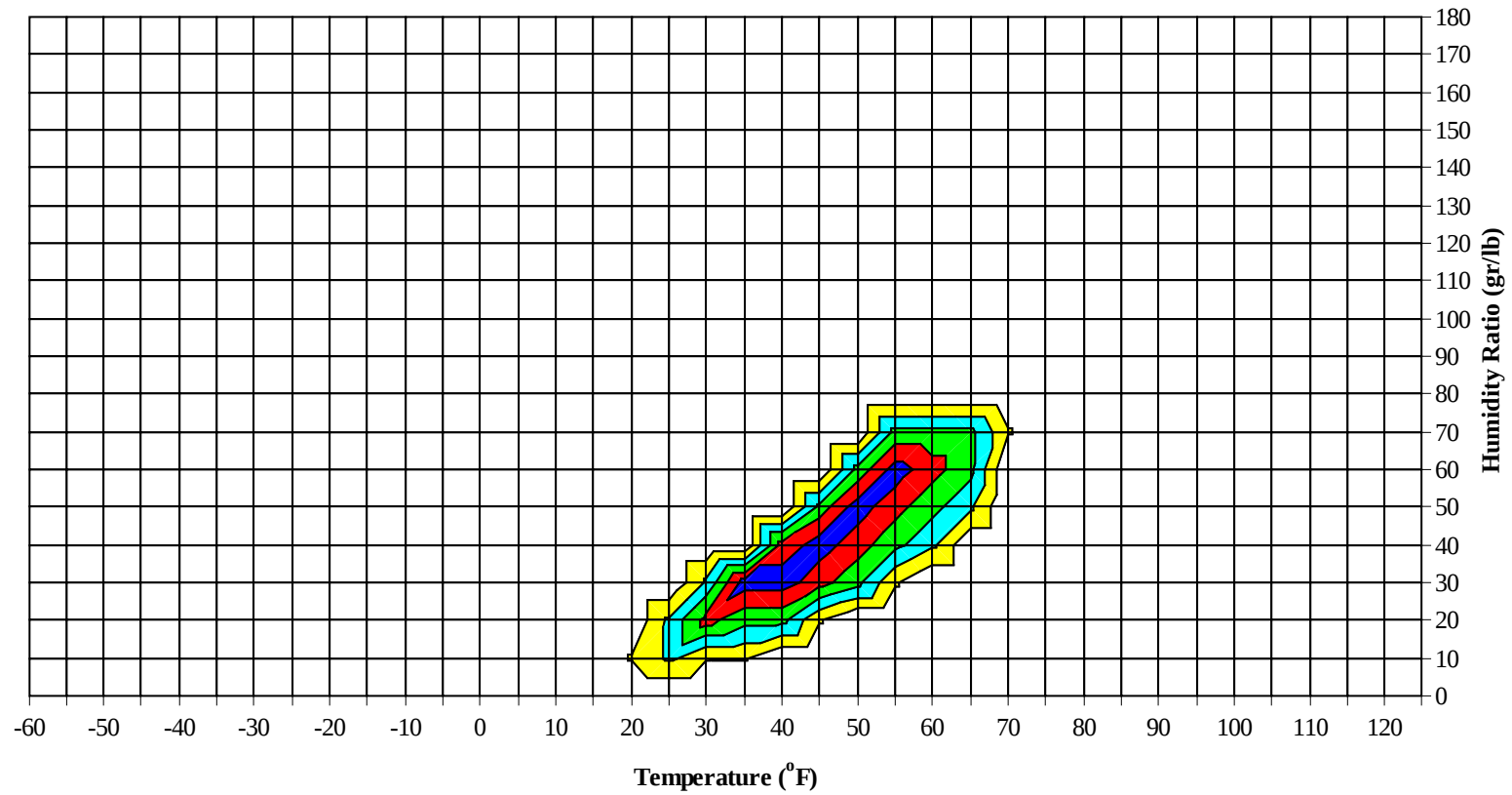
Average Annual Climate



PORT HARDY CN

WMO No. 711090

Long Term Psychrometric Summary

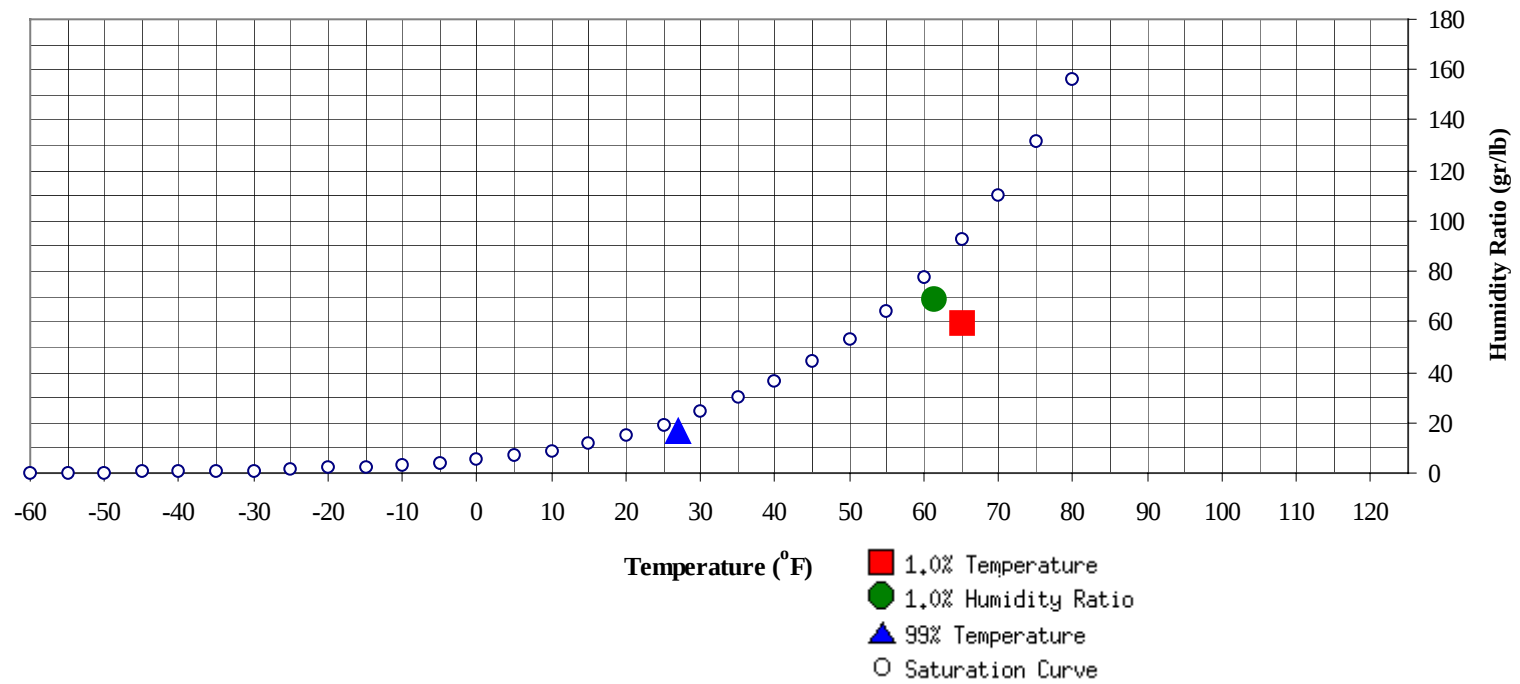


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

PORT HARDY CN

WMO No. 711090

Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity Ratio	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	27	16.6	9.0	Ratio	69.3	61.3	58.8	57.2	25.5

1.0% Dry Bulb	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
	65	59.4	57.7	24.8

PORT HARDY CN

WMO No. 711090

Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	January					February					March				
	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		
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64							0		0	52.7		0	0	0	51.6
55 / 59		0	0	0	50.4	0	1	0	1	49.8		3	2	5	48.0
50 / 54	3	6	5	14	47.2	3	14	6	23	46.8	2	31	15	48	46.1
45 / 49	40	61	44	145	43.8	37	68	52	157	43.8	41	112	75	228	43.3
40 / 44	53	73	59	185	40.2	47	64	53	164	39.9	59	71	69	199	39.8
35 / 39	67	69	68	204	35.8	67	58	65	190	35.7	82	26	65	173	36.1
30 / 34	50	28	48	127	31.0	47	17	36	101	31.0	54	4	21	79	31.3
25 / 29	24	9	16	49	25.9	15	2	9	26	25.9	10	0	2	12	26.6
20 / 24	7	2	6	15	20.9	4	1	1	6	20.7	0			0	20.9
15 / 19	3	0	1	4	18.0	2	0	1	3	15.8	0			0	18.0
10 / 14						1	0	0	1	11.1					

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.

PORT HARDY CN

WMO No. 711090

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		
80 / 84						0	0	0	62.7						
75 / 79						0	0	0	61.2		0	0	0	61.3	
70 / 74		0	0	0	56.1	1	1	2	57.4		1	2	3	58.2	
65 / 69		0	0	0	53.8	2	1	3	55.5		0	4	2	6	57.4
60 / 64		3	2	5	51.8	0	12	7	19	53.8	0	30	14	44	55.2
55 / 59	0	19	9	28	49.6	6	56	31	93	51.1	22	119	75	216	52.5
50 / 54	11	73	40	124	46.8	49	125	89	262	48.0	131	81	116	327	49.7
45 / 49	65	110	93	269	43.6	116	51	91	257	44.7	71	5	29	105	45.7
40 / 44	70	30	58	158	40.3	53	2	24	79	40.8	14		2	16	41.5
35 / 39	69	4	33	106	36.6	23	0	5	28	37.3	2		0	2	37.9
30 / 34	25	0	4	29	32.0	1		0	1	33.2					
25 / 29	0			0	28.0										
20 / 24															
15 / 19															
10 / 14															

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PORT HARDY CN

WMO No. 711090

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	July					August					September				
	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		
80 / 84								0	0	65.0					
75 / 79		1	0	1	62.5		0	0	0	62.9		0	0	0	60.5
70 / 74		3	2	5	60.9		4	3	7	61.5		1	1	2	60.1
65 / 69	0	13	9	22	58.8		15	9	24	59.6		5	2	7	58.9
60 / 64	3	83	47	133	56.6	5	82	50	137	57.2	1	34	17	52	56.7
55 / 59	92	123	121	336	54.0	98	125	125	348	54.5	35	109	76	220	53.7
50 / 54	124	25	63	212	51.0	114	22	56	193	51.4	114	83	104	301	50.7
45 / 49	27	0	5	32	46.3	28	0	5	33	46.3	65	7	36	108	46.1
40 / 44	2			2	42.3	2		0	2	42.2	18		5	23	41.4
35 / 39						0			0	38.3	6		0	6	37.4
30 / 34											0			0	34.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															

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PORT HARDY CN

WMO No. 711090

Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	October					November					December				
	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		
80 / 84															
75 / 79															
70 / 74		0	0	0	59.9										
65 / 69		1	0	1	56.9										
60 / 64	1	5	2	8	55.7		0		0	52.0					
55 / 59	6	31	14	52	52.9	1	3	1	5	52.7	0	1	0	1	52.4
50 / 54	52	113	74	239	49.4	14	26	16	56	48.8	2	4	3	9	49.1
45 / 49	102	83	102	287	45.4	54	89	67	210	44.3	36	57	42	135	44.1
40 / 44	48	12	35	95	41.1	67	73	70	210	40.5	62	79	66	206	40.3
35 / 39	29	2	17	48	36.9	60	34	54	148	36.3	73	73	74	219	36.2
30 / 34	9	1	3	13	31.6	29	11	25	65	31.0	54	24	49	127	31.2
25 / 29	1	0	0	1	25.2	10	3	6	19	25.3	16	9	12	37	25.0
20 / 24	0			0	22.0	2	1	1	4	20.1	4	1	2	7	20.0
15 / 19						1	1	1	3	16.1	2	0	1	3	16.5
10 / 14						1	0	0	1	11.4	0	0		0	13.0

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.

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WMO No. 711090

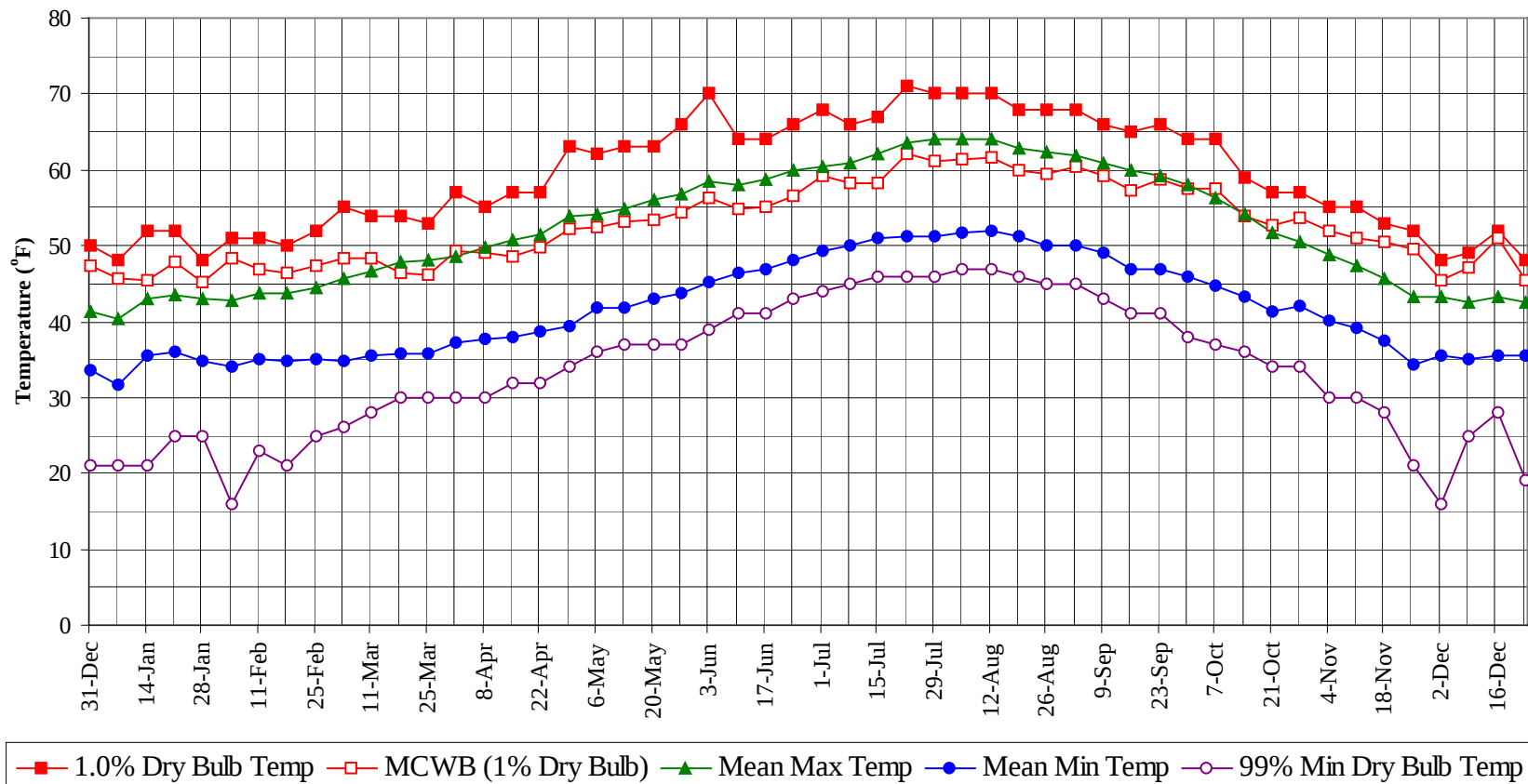
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

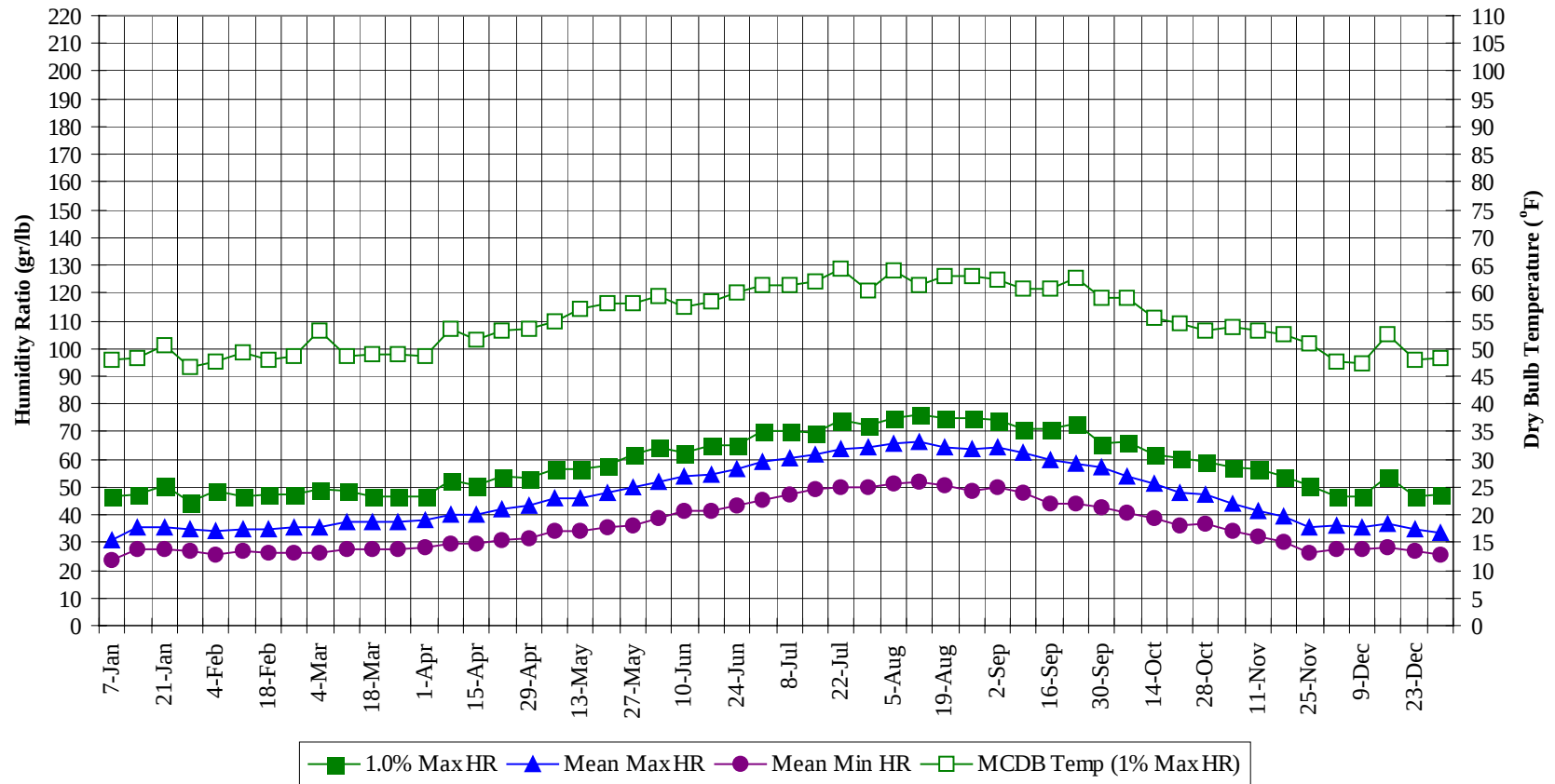
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
80 / 84		0	0	0	63.6
75 / 79		2	1	3	61.9
70 / 74		11	8	19	60.2
65 / 69	0	41	24	65	58.7
60 / 64	10	250	138	398	56.4
55 / 59	260	588	452	1300	53.5
50 / 54	616	600	584	1800	49.5
45 / 49	684	644	640	1969	44.4
40 / 44	495	404	443	1341	40.3
35 / 39	479	265	384	1128	36.2
30 / 34	271	84	187	541	31.2
25 / 29	77	23	44	144	25.6
20 / 24	18	5	11	34	20.6
15 / 19	8	2	4	14	16.6
10 / 14	2	1	1	4	11.4
				</	

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

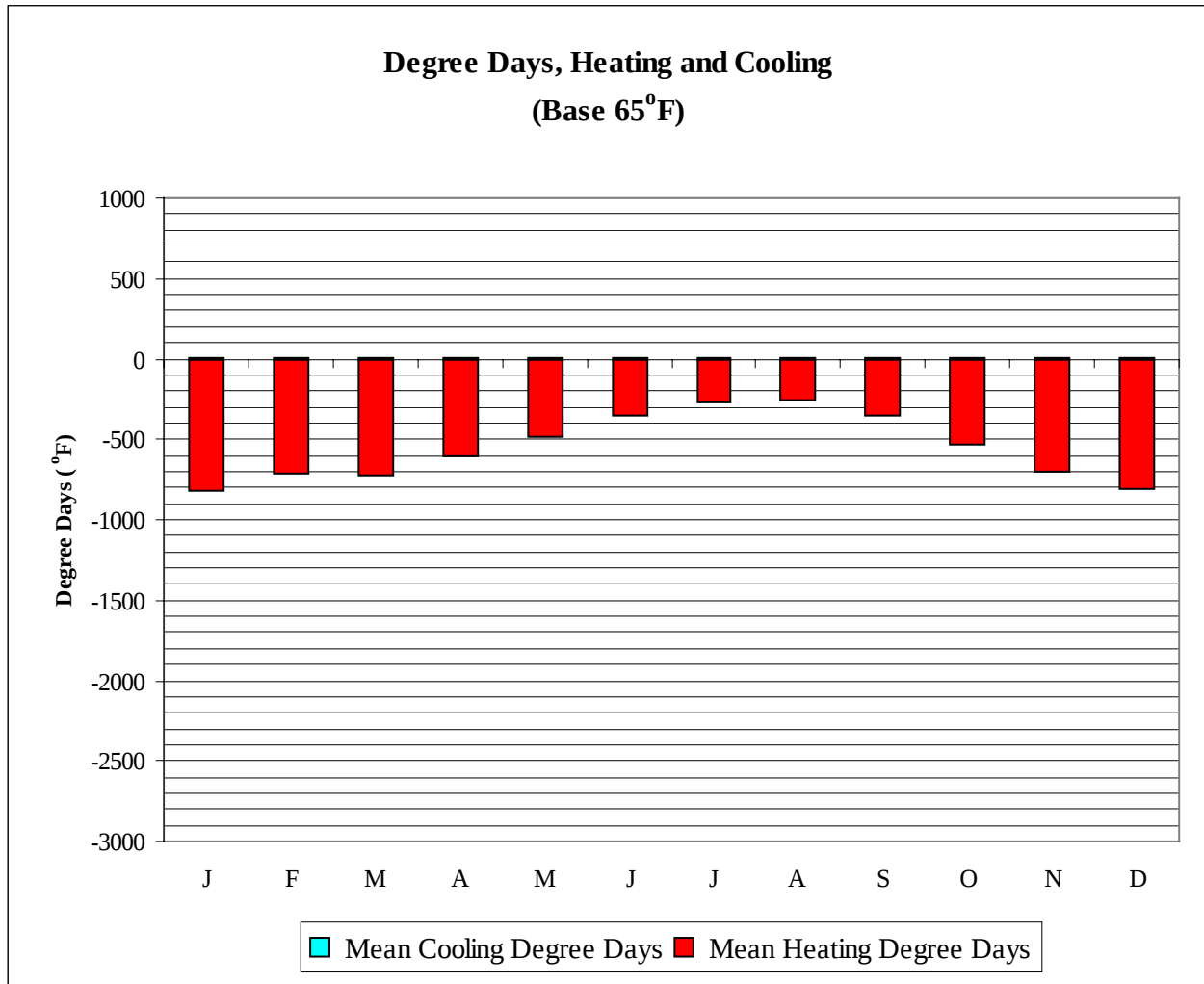


PORT HARDY CN**WMO No. 711090****Long Term Dry Bulb Temperature and Humidity Summary**

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	48.0	45.7	40.5	31.7	21.0	46.9	47.9	31.1	23.4
14-Jan	52.0	45.5	43.0	35.6	21.0	47.6	48.2	35.6	27.8
21-Jan	52.0	48.0	43.5	36.0	25.0	50.4	50.5	35.7	27.8
28-Jan	48.0	45.2	43.1	34.9	25.0	44.8	46.6	34.9	26.7
4-Feb	51.0	48.4	42.9	34.1	16.0	48.3	47.7	33.9	25.6
11-Feb	51.0	47.0	43.8	35.0	23.0	46.9	49.3	34.9	26.7
18-Feb	50.0	46.4	43.8	34.8	21.0	47.6	48.1	35.0	26.3
25-Feb	52.0	47.5	44.4	35.0	25.0	47.6	48.6	35.6	26.6
4-Mar	55.0	48.4	45.6	34.8	26.0	49.0	53.1	35.5	26.3
11-Mar	54.0	48.3	46.6	35.5	28.0	48.3	48.8	37.2	27.7
18-Mar	54.0	46.3	47.9	35.8	30.0	46.9	48.8	37.3	27.6
25-Mar	53.0	46.3	48.1	35.7	30.0	46.9	48.9	37.5	27.4
1-Apr	57.0	49.3	48.6	37.1	30.0	46.9	48.6	38.3	28.2
8-Apr	55.0	49.2	49.7	37.6	30.0	52.5	53.5	40.1	29.7
15-Apr	57.0	48.5	50.7	38.0	32.0	50.4	51.7	40.3	29.3
22-Apr	57.0	49.8	51.5	38.7	32.0	53.9	53.2	41.8	30.7
29-Apr	63.0	52.3	53.8	39.5	34.0	53.2	53.6	43.3	31.3
6-May	62.0	52.3	54.1	41.7	36.0	56.7	54.8	46.2	34.2
13-May	63.0	53.2	54.8	41.9	37.0	56.7	57.2	45.9	33.9
20-May	63.0	53.4	56.1	42.9	37.0	58.1	58.2	47.6	35.2
27-May	66.0	54.4	56.9	43.8	37.0	61.6	58.2	49.9	36.2
3-Jun	70.0	56.3	58.6	45.1	39.0	64.4	59.3	51.9	38.5
10-Jun	64.0	54.9	58.1	46.5	41.0	62.3	57.4	53.9	41.1
17-Jun	64.0	55.0	58.8	46.8	41.0	65.1	58.5	54.7	41.6
24-Jun	66.0	56.5	60.0	48.1	43.0	65.1	60.1	56.8	43.3
1-Jul	68.0	59.3	60.5	49.2	44.0	70.0	61.4	59.3	45.6
8-Jul	66.0	58.3	60.9	50.0	45.0	70.0	61.4	60.3	47.6
15-Jul	67.0	58.2	62.0	50.9	46.0	69.3	62.1	61.9	49.0
22-Jul	71.0	62.0	63.6	51.2	46.0	74.2	64.4	63.8	49.6
29-Jul	70.0	61.1	64.0	51.4	46.0	72.1	60.5	64.3	49.9
5-Aug	70.0	61.4	64.1	51.8	47.0	74.9	64.1	65.9	51.5
12-Aug	70.0	61.7	63.9	52.0	47.0	76.3	61.3	66.4	52.1
19-Aug	68.0	59.9	63.0	51.2	46.0	74.9	63.2	64.7	50.4
26-Aug	68.0	59.4	62.4	50.0	45.0	74.9	63.0	63.8	48.4
2-Sep	68.0	60.5	61.9	50.0	45.0	74.2	62.4	64.2	49.8
9-Sep	66.0	59.1	60.8	49.1	43.0	70.7	60.9	62.4	48.0
16-Sep	65.0	57.3	59.9	46.9	41.0	70.7	60.6	59.6	44.2
23-Sep	66.0	58.8	59.2	46.9	41.0	72.8	62.6	58.4	44.1
30-Sep	64.0	57.4	58.0	46.0	38.0	65.8	59.1	57.1	42.7
7-Oct	64.0	57.5	56.4	44.6	37.0	66.5	59.1	54.0	40.5
14-Oct	59.0	53.9	54.1	43.3	36.0	61.6	55.4	51.1	38.7
21-Oct	57.0	52.6	51.8	41.4	34.0	60.2	54.6	47.9	35.9
28-Oct	57.0	53.7	50.6	42.0	34.0	58.8	53.2	47.2	36.7
4-Nov	55.0	51.9	48.8	40.1	30.0	57.4	53.8	43.8	33.9
11-Nov	55.0	51.1	47.5	39.2	30.0	56.7	53.3	41.7	32.3
18-Nov	53.0	50.5	45.7	37.5	28.0	53.9	52.6	39.2	30.2
25-Nov	52.0	49.6	43.2	34.4	21.0	50.4	50.9	35.2	26.4
2-Dec	48.0	45.5	43.2	35.6	16.0	46.9	47.7	35.9	27.6
9-Dec	49.0	47.1	42.6	35.0	25.0	46.9	47.3	35.5	27.4
16-Dec	52.0	51.0	43.3	35.4	28.0	53.9	52.5	36.5	28.0
23-Dec	48.0	45.5	42.6	35.5	19.0	46.9	48.1	34.5	27.0
31-Dec	50.0	47.4	41.3	33.7	21.0	47.6	48.3	33.3	25.3

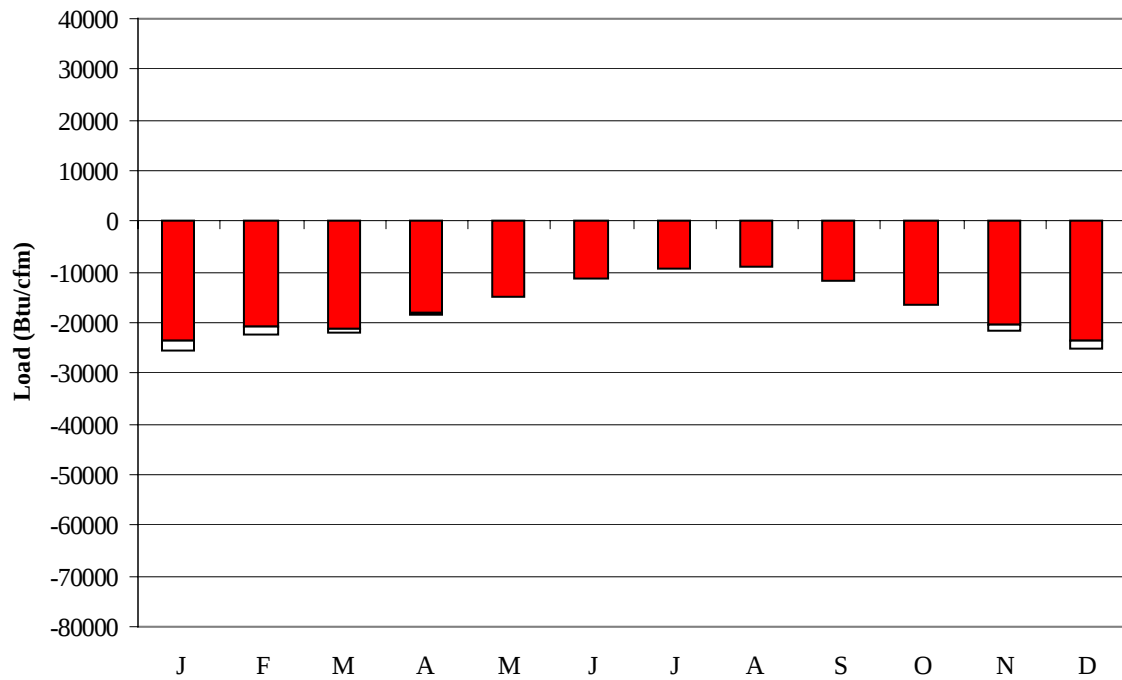
PORT HARDY CN

WMO No. 711090



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	820
FEB	0	717
MAR	0	722
APR	0	601
MAY	1	485
JUN	1	353
JUL	3	267
AUG	4	260
SEP	1	355
OCT	0	537
NOV	0	702
DEC	0	813
ANN	10	6632

Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



■ Average Sensible Cooling Load ■ Average Sensible Heating Load
■ Average Latent Cooling (Drying) Load ■ Average Latent Heating (Humidifying) Load

	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	0	-23658	0	-1744
FEB	0	-20779	0	-1462
MAR	0	-21123	0	-1017
APR	0	-17901	0	-359
MAY	2	-14966	0	-44
JUN	0	-11459	0	-2
JUL	0	-9273	1	0
AUG	1	-9094	3	-1
SEP	0	-11514	0	-6
OCT	0	-16324	0	-110
NOV	0	-20527	0	-893
DEC	0	-23479	0	-1460
ANN	3	-200097	4	-7098

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

No Solar Radiation
Data Available

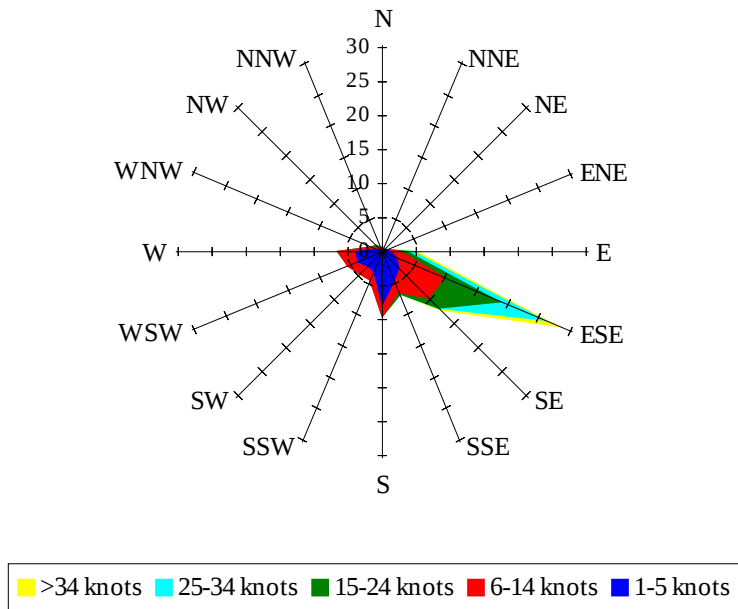


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

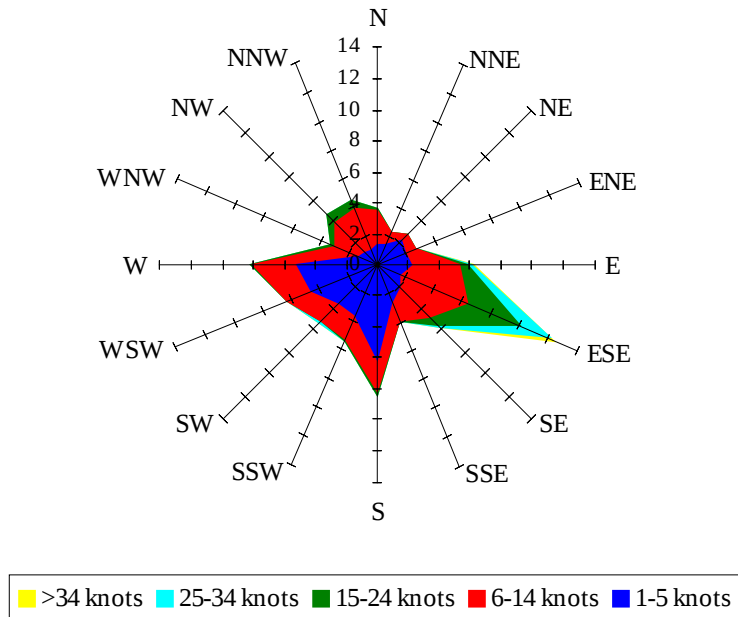
Labels of Percent Frequency on North Axis



Percent Calm = 13.72

Wind Summary - March, April, and May

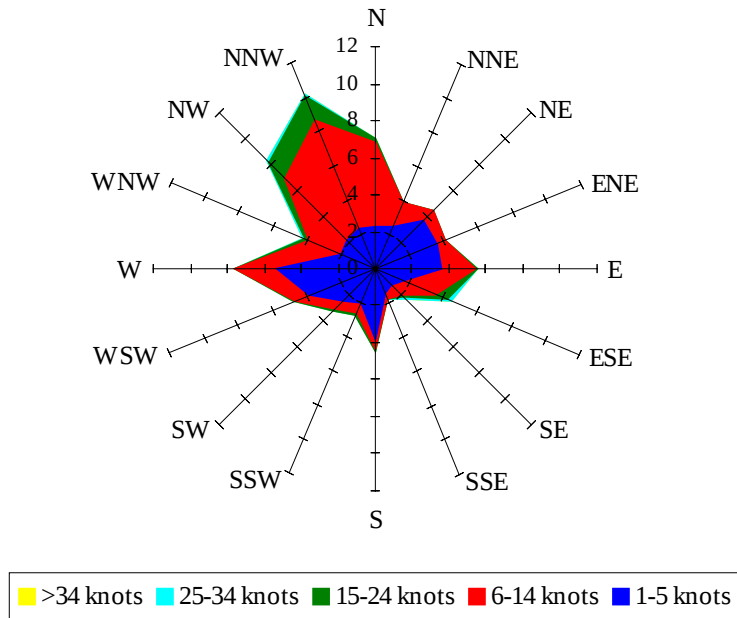
Labels of Percent Frequency on North Axis



Percent Calm = 15.09

Wind Summary - June, July, and August

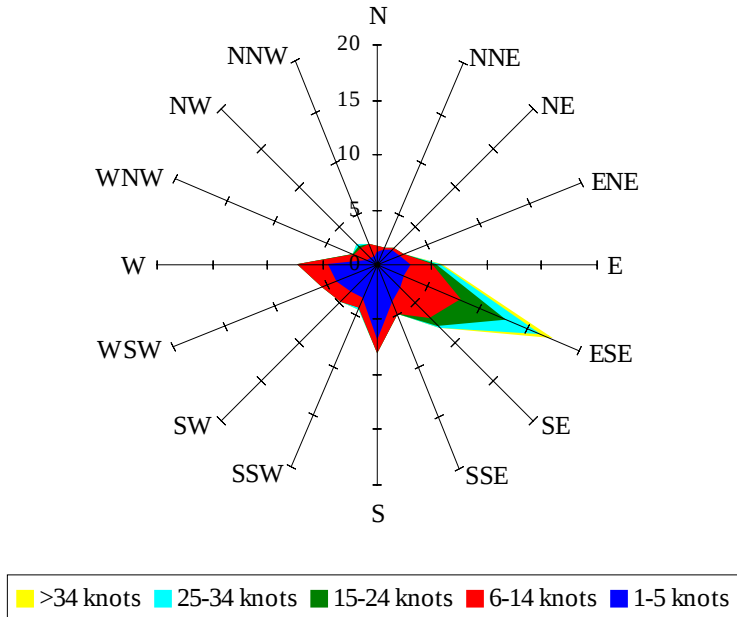
Labels of Percent Frequency on North Axis



Percent Calm = 21.37

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 20.60