

OCEANA NAS/SOUCEK VA

Latitude = 36.82 N

WMO No. 723075

Longitude = 76.03 W

Elevation = 23 feet

Period of Record = 1973 to 1996

Average Pressure = 30.00 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	96	78	115	8.3	SW
0.4% Occurrence	93	77	116	8.4	SW
1.0% Occurrence	90	76	114	8.4	SW
2.0% Occurrence	88	75	111	8.3	SW
Mean Daily Range	16	-	-	-	-
97.5% Occurrence	28	25	13	6.8	N
99.0% Occurrence	23	20	10	7.6	N
99.6% Occurrence	19	17	9	6.2	NNW
Median of Extreme Lows	14	12	6	7.0	W
	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	82	91	145	7.8	SSW
0.4% Occurrence	79	88	132	7.5	SW
1.0% Occurrence	78	87	128	7.6	SSW
2.0% Occurrence	77	85	125	7.4	SW
	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	151	87	1.00	6.5	E
0.4% Occurrence	139	83	0.94	5.9	SSW
1.0% Occurrence	132	83	0.88	6.5	SSW
2.0% Occurrence	127	82	0.85	6.4	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		43	944	951	2267

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
8	3.4	110	3.8 + 1.0
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 (#)
62.4	N/A	N/A	35

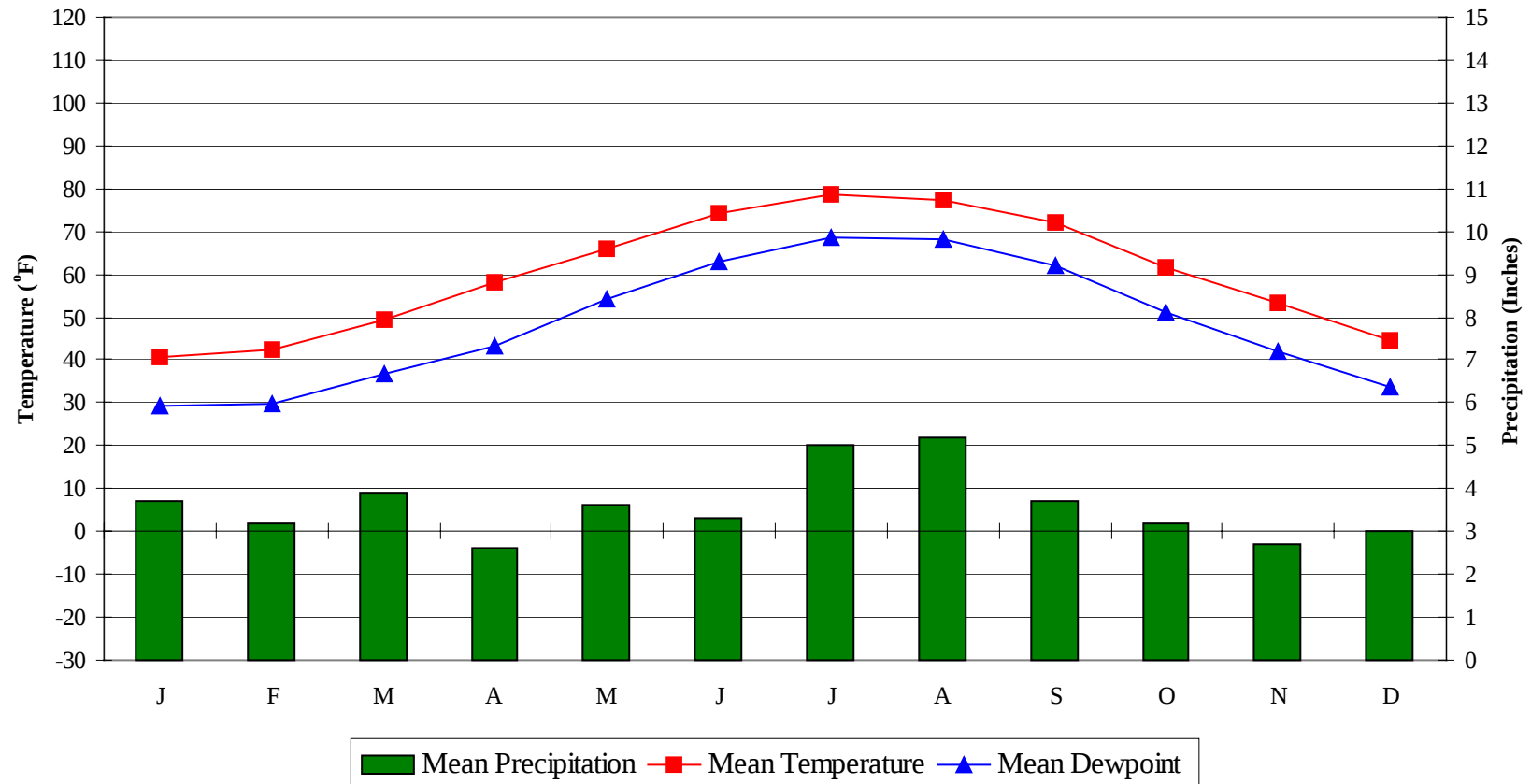
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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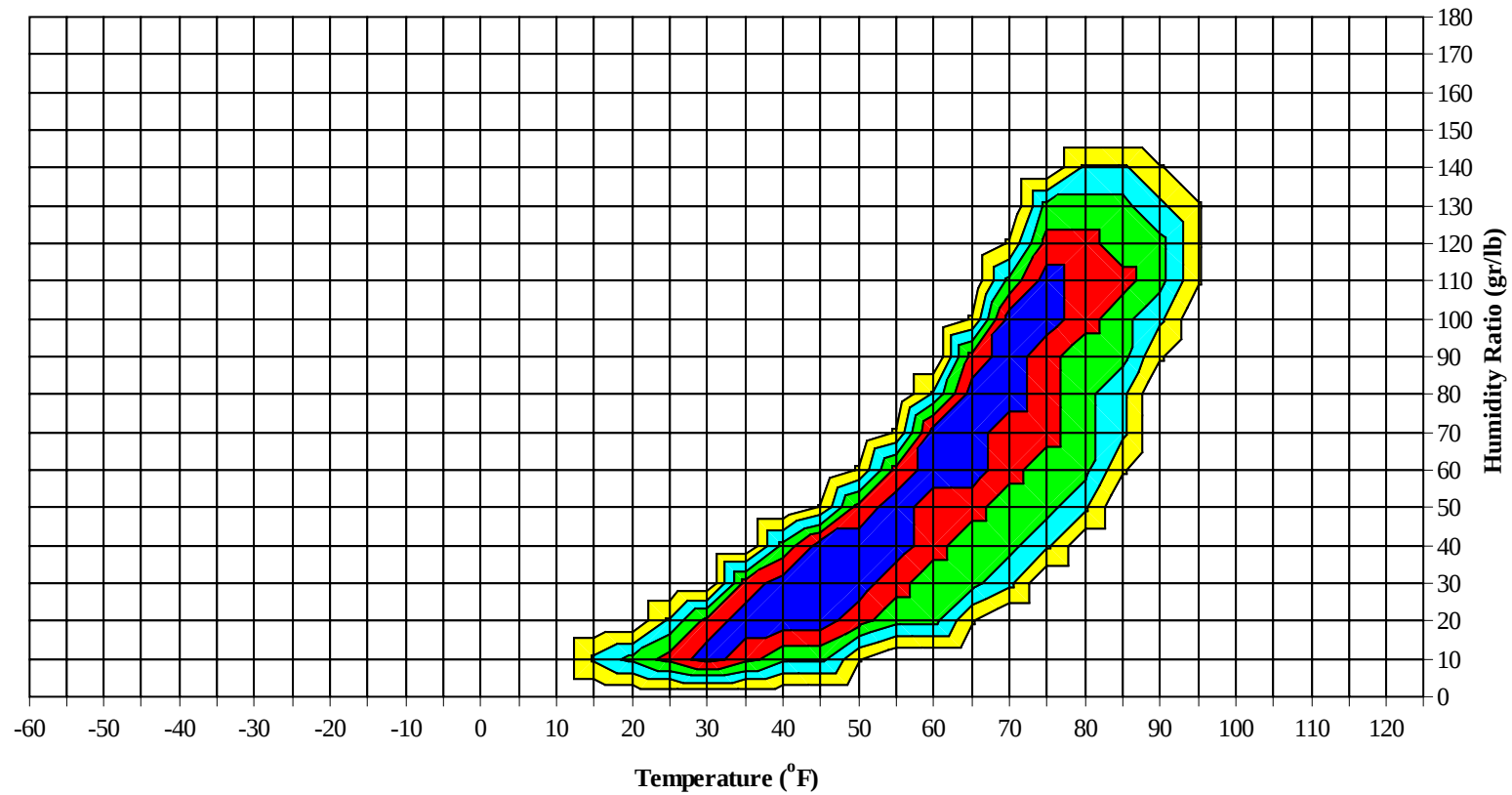
VA

WMO No. 723075

Average Annual Climate

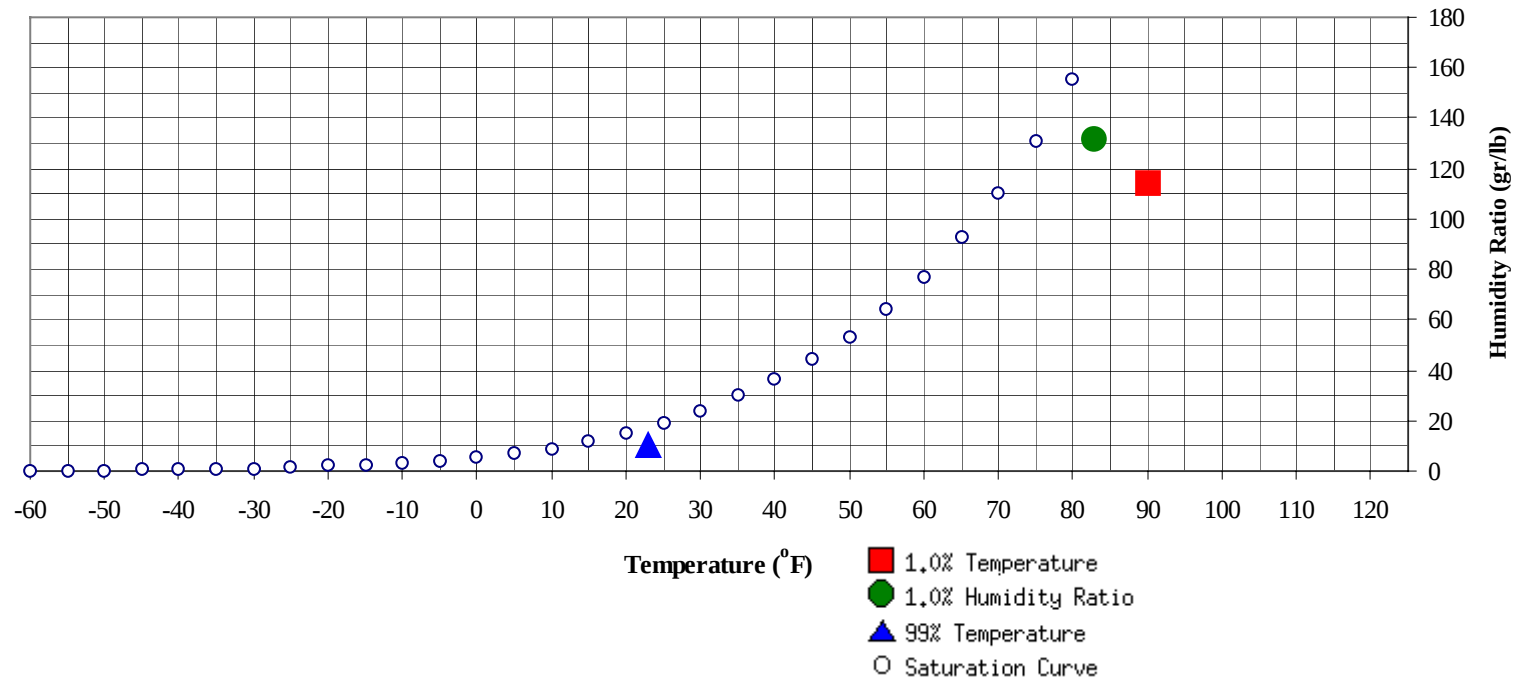


Long Term Psychrometric Summary



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

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)
	23	10.4	7.1		131.6	82.8	77.1	75	40.5

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	90	114	76.2	39.5

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89												1		1	67.0
80 / 84												4	1	5	64.8
75 / 79		0		0	62.6		2	0	2	62.9	0	7	2	9	62.4
70 / 74		3	1	4	61.5		7	2	9	59.2	2	14	6	22	60.5
65 / 69	1	7	3	11	60.1	2	11	7	20	56.8	6	21	12	39	58.0
60 / 64	6	12	11	29	56.0	7	15	12	34	54.2	17	27	23	67	54.6
55 / 59	15	20	13	48	51.3	14	19	15	48	50.3	22	35	25	82	50.2
50 / 54	13	26	18	57	46.4	17	24	19	60	46.0	29	42	39	110	46.0
45 / 49	28	49	38	114	41.9	23	37	28	88	41.7	45	47	54	146	42.0
40 / 44	42	48	47	136	37.8	34	39	40	113	37.4	50	29	44	123	37.5
35 / 39	41	33	44	118	33.2	40	32	40	112	32.9	42	12	26	80	33.2
30 / 34	44	26	34	104	28.5	38	21	34	93	28.4	24	7	12	43	28.5
25 / 29	29	14	24	67	23.8	29	12	19	60	23.9	8	1	3	12	24.3
20 / 24	17	5	10	32	19.3	14	4	6	24	19.7	2	1	1	4	19.9
15 / 19	9	3	3	15	15.1	6	1	2	9	15.6					
10 / 14	3	1	2	6	10.0	1	0	0	1	12.0					
5 / 9	1	0	0	1	5.1										
0 / 4	0	0		0	0.5										
-5 / -1	0			0	-3.8										

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.

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		
100 / 104															
95 / 99							0	0	0	74.5		2	0	2	77.6
90 / 94		1	0	1	66.3		2	0	2	72.7		14	3	17	75.8
85 / 89		4	0	4	66.2	0	16	4	20	70.7	0	39	11	50	73.6
80 / 84		14	4	18	64.6	0	31	11	42	68.5	7	66	29	102	71.5
75 / 79	0	19	8	27	62.8	7	43	23	73	66.5	41	60	59	160	69.3
70 / 74	4	32	18	54	60.5	28	47	40	115	63.9	85	37	70	193	66.7
65 / 69	26	35	32	93	58.2	56	46	51	153	60.7	60	16	46	122	62.4
60 / 64	34	41	33	108	54.2	63	39	57	159	56.6	30	4	16	50	58.0
55 / 59	40	41	42	123	50.1	47	19	37	103	52.4	12	1	6	19	53.8
50 / 54	48	31	50	129	46.3	32	4	21	57	48.2	4	0	0	4	49.7
45 / 49	46	17	35	98	42.0	13		4	17	43.9	0			0	46.5
40 / 44	27	4	15	46	37.9	2		1	3	39.7					
35 / 39	13	1	3	17	33.4	0			0	36.0					
30 / 34	2		0	2	29.3										
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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		
100 / 104		0		0	79.5		0		0	78.7					
95 / 99		8	1	9	78.2		4	0	4	78.5		1		1	76.0
90 / 94	0	36	8	44	77.5	0	22	3	25	77.2		8	1	9	76.3
85 / 89	3	68	22	93	75.6	1	60	14	75	75.4	0	22	4	26	74.2
80 / 84	26	76	60	162	73.8	16	82	45	143	73.6	2	54	16	72	72.2
75 / 79	100	45	89	235	71.8	84	56	95	235	71.6	34	69	53	156	70.1
70 / 74	79	14	51	144	68.6	97	20	68	185	68.5	78	58	74	210	66.5
65 / 69	31	1	14	46	63.6	38	3	19	60	63.6	63	21	56	140	62.1
60 / 64	8		2	10	58.7	10	0	4	14	58.3	37	6	26	69	57.2
55 / 59	1		0	1	55.7	2		0	2	55.1	20	1	10	31	53.3
50 / 54	0			0	52.0	0		0	0	47.3	6		1	7	49.5
45 / 49											0			0	44.4
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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		
100 / 104															
95 / 99															
90 / 94		0	0	0	73.7										
85 / 89		3	0	3	71.9										
80 / 84	0	13	2	15	69.6		1		1	68.1		0	0	0	69.5
75 / 79	3	29	8	40	67.5		14	1	15	65.1		2	0	2	66.3
70 / 74	16	47	27	90	64.9	3	23	8	34	63.3	1	7	2	10	63.4
65 / 69	37	58	47	142	60.8	14	30	24	68	60.9	4	11	9	24	60.0
60 / 64	51	53	57	161	56.3	28	37	32	97	56.4	10	19	14	43	56.3
55 / 59	50	29	48	127	51.3	33	37	35	105	51.6	17	28	17	62	51.8
50 / 54	42	11	34	87	47.3	35	46	42	123	46.5	24	42	34	100	46.8
45 / 49	31	3	18	52	43.4	43	33	43	119	41.8	37	52	44	133	42.1
40 / 44	14	1	6	21	38.9	37	13	29	79	37.4	38	39	45	122	37.6
35 / 39	4		1	5	34.9	27	4	18	49	33.5	43	23	37	103	32.9
30 / 34	1		0	1	30.7	15	1	8	24	29.4	37	15	27	79	28.4
25 / 29						4	0	1	5	25.4	25	8	14	47	24.2
20 / 24						0	0		0	21.4	7	2	4	13	19.8
15 / 19											3	1	1	5	15.9
10 / 14											1	0	0	1	10.3
5 / 9											0			0	6.3
0 / 4															
-5 / -1															

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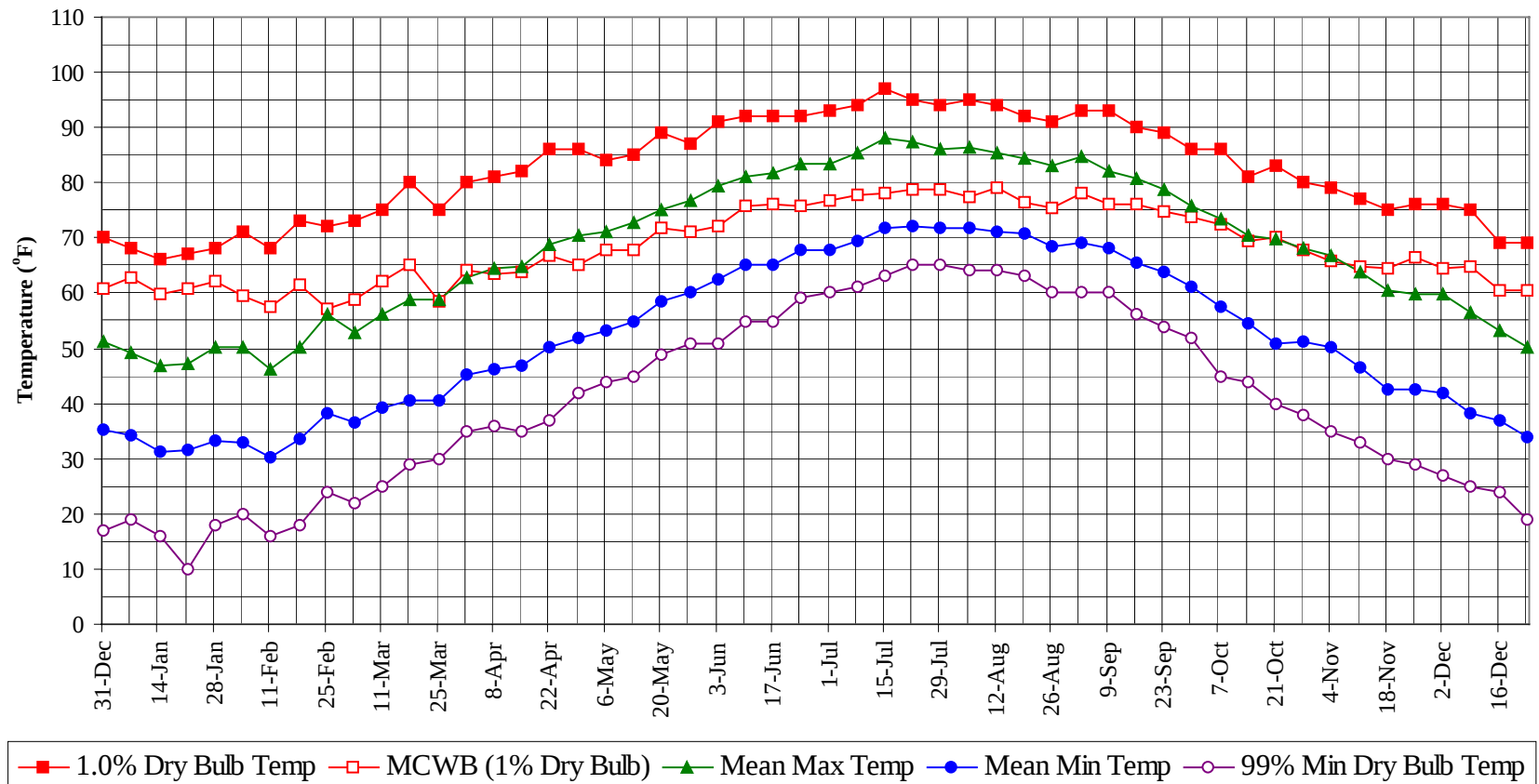
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

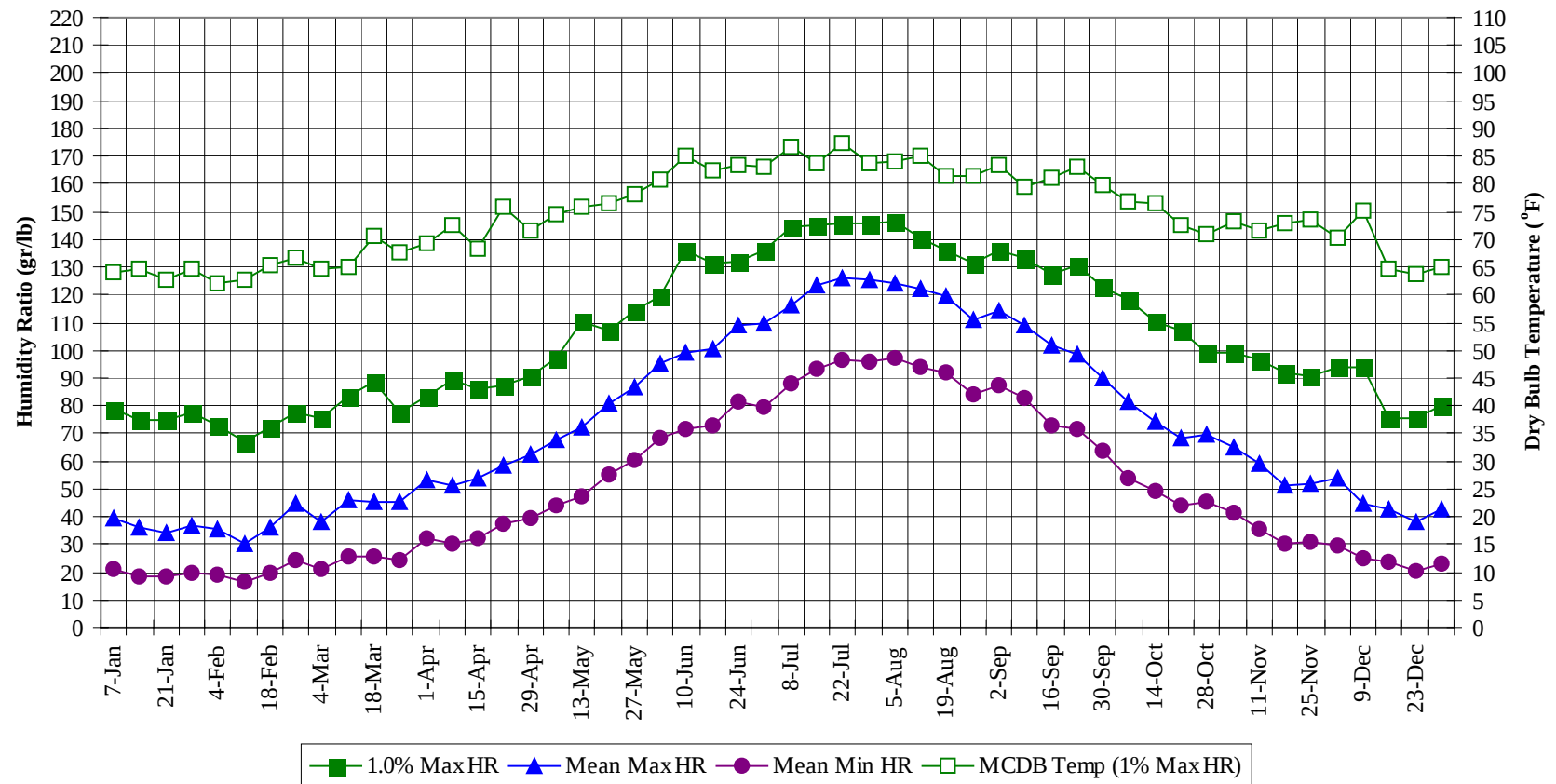
Annual Totals						
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	
	01 To 08	09 To 16	17 To 00			
100 / 104	0			0	78.8	
95 / 99	16			2	18	78.0
90 / 94	0	83	16	99	76.8	
85 / 89	4	212	54	270	74.5	
80 / 84	51	341	168	560	72.2	
75 / 79	269	347	339	955	70.0	
70 / 74	393	308	366	1067	66.1	
65 / 69	338	261	319	918	61.0	
60 / 64	301	254	284	839	56.1	
55 / 59	272	229	248	749	51.3	
50 / 54	250	227	259	736	46.7	
45 / 49	266	236	264	766	42.1	
40 / 44	246	172	226	644	37.6	
35 / 39	211	106	169	486	33.1	
30 / 34	162	71	116	349	28.5	
25 / 29	95	36	62	193	24.0	
20 / 24	41	12	21	74	19.6	
15 / 19	18	4	6	28	15.4	
10 / 14	4	1	2	7	10.3	
5 / 9	1	0	0	1	5.3	
0 / 4	0	0		0	0.5	
-5 / -1	0			0	-3.8	

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



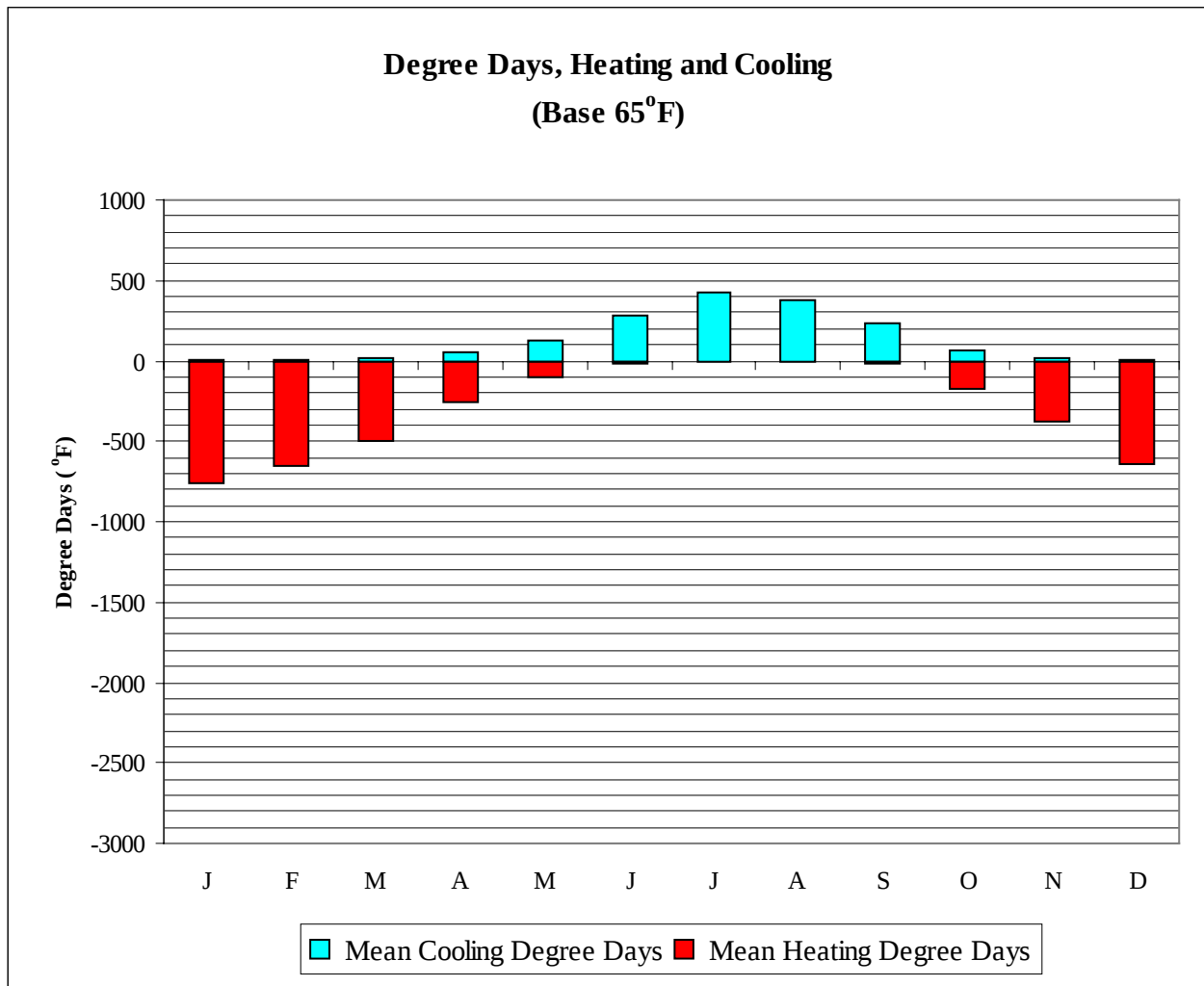
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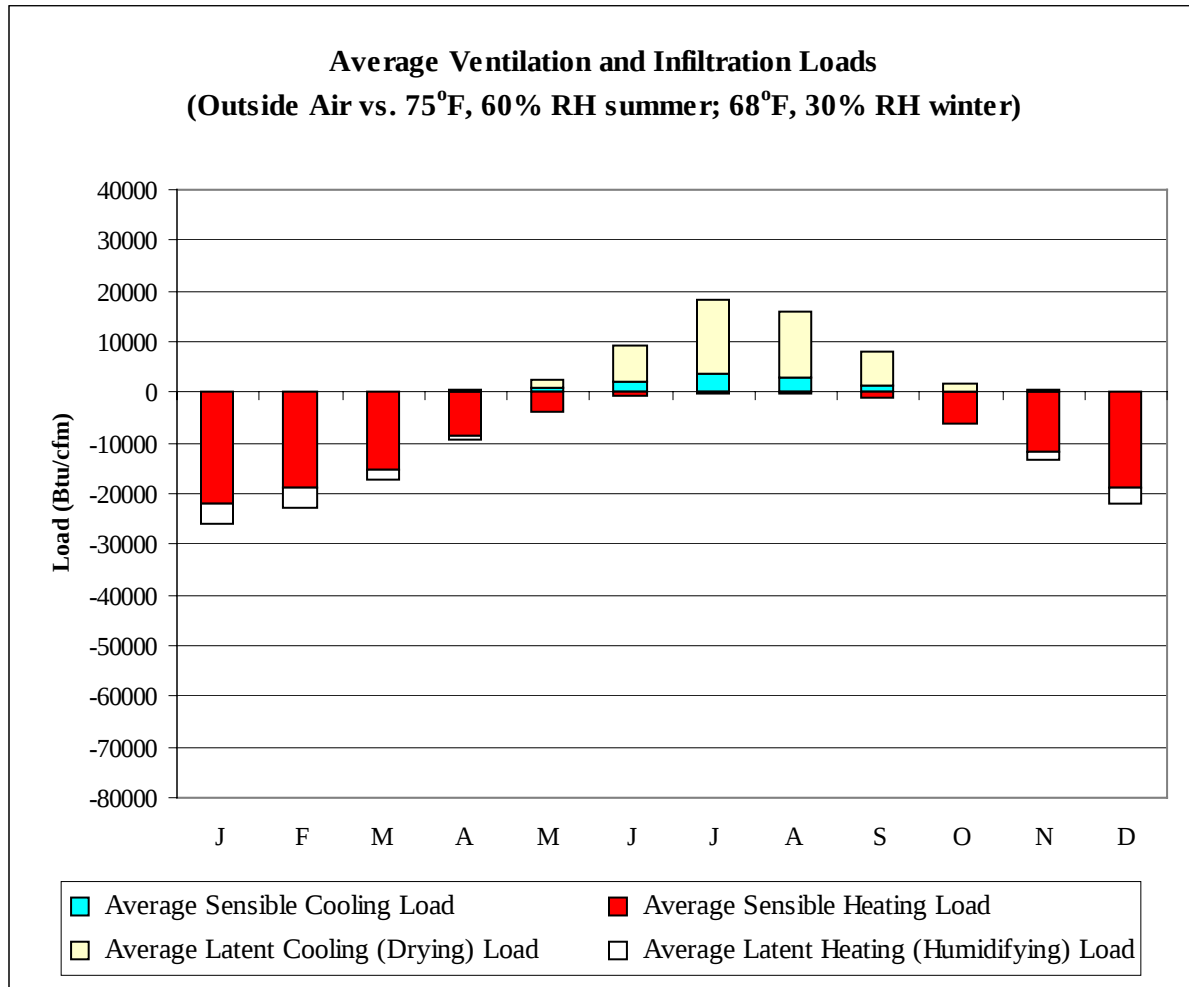
WMO No. 723075

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	68.0	62.9	49.3	34.2	19.0	79.1	64.0	39.3	21.3
14-Jan	66.0	59.9	46.9	31.2	16.0	74.9	64.6	36.0	18.2
21-Jan	67.0	60.9	47.3	31.6	10.0	74.9	62.7	34.2	18.6
28-Jan	68.0	62.0	50.1	33.2	18.0	77.7	64.6	36.5	19.7
4-Feb	71.0	59.3	50.2	32.7	20.0	72.8	62.0	35.6	18.8
11-Feb	68.0	57.4	46.4	30.2	16.0	67.2	62.6	30.5	16.4
18-Feb	73.0	61.3	50.3	33.5	18.0	72.1	65.3	36.2	20.0
25-Feb	72.0	57.1	56.1	38.2	24.0	77.7	66.8	44.7	24.3
4-Mar	73.0	58.9	52.9	36.4	22.0	75.6	64.6	38.0	21.3
11-Mar	75.0	62.3	56.0	39.3	25.0	83.3	65.1	45.8	25.9
18-Mar	80.0	65.1	59.0	40.6	29.0	88.9	70.8	45.6	25.6
25-Mar	75.0	58.5	58.7	40.7	30.0	77.7	67.7	45.2	24.4
1-Apr	80.0	64.1	62.9	45.3	35.0	83.3	69.4	53.5	32.0
8-Apr	81.0	63.4	64.6	46.1	36.0	89.6	72.7	51.5	30.1
15-Apr	82.0	63.9	64.8	46.8	35.0	86.1	68.2	53.6	32.1
22-Apr	86.0	66.8	68.7	50.1	37.0	87.5	75.8	58.6	37.1
29-Apr	86.0	65.1	70.5	51.8	42.0	90.3	71.7	62.1	39.5
6-May	84.0	67.9	71.1	53.3	44.0	97.3	74.5	68.0	43.8
13-May	85.0	67.9	72.8	55.0	45.0	110.6	75.9	72.4	47.4
20-May	89.0	71.8	75.0	58.4	49.0	107.1	76.6	80.9	55.4
27-May	87.0	71.2	76.7	60.2	51.0	114.1	78.1	87.0	60.5
3-Jun	91.0	72.0	79.4	62.6	51.0	119.7	80.6	95.1	68.5
10-Jun	92.0	75.9	81.2	65.0	55.0	135.8	85.1	99.5	71.5
17-Jun	92.0	76.1	81.7	65.2	55.0	131.6	82.4	100.6	73.1
24-Jun	92.0	75.9	83.5	67.9	59.0	132.3	83.4	109.2	81.3
1-Jul	93.0	76.7	83.5	67.7	60.0	135.8	83.0	109.6	79.5
8-Jul	94.0	77.7	85.6	69.5	61.0	144.2	86.6	116.4	88.2
15-Jul	97.0	78.1	88.2	71.8	63.0	144.9	83.8	123.5	93.1
22-Jul	95.0	78.6	87.4	72.2	65.0	145.6	87.3	126.1	96.6
29-Jul	94.0	78.8	86.2	71.7	65.0	145.6	83.7	125.4	95.9
5-Aug	95.0	77.5	86.5	71.7	64.0	146.3	84.1	124.1	96.9
12-Aug	94.0	79.2	85.5	71.1	64.0	140.7	85.1	122.4	94.2
19-Aug	92.0	76.4	84.5	70.7	63.0	135.8	81.4	119.5	92.0
26-Aug	91.0	75.5	83.1	68.4	60.0	131.6	81.5	111.1	83.8
2-Sep	93.0	78.2	84.6	69.2	60.0	135.8	83.4	114.2	87.5
9-Sep	93.0	76.1	82.0	68.1	60.0	133.0	79.5	109.0	82.8
16-Sep	90.0	76.2	80.8	65.6	56.0	127.4	81.2	101.8	73.1
23-Sep	89.0	74.7	78.9	63.8	54.0	130.9	83.2	98.7	71.4
30-Sep	86.0	73.6	75.9	61.3	52.0	122.5	79.7	90.0	63.8
7-Oct	86.0	72.4	73.6	57.4	45.0	118.3	76.8	81.6	54.1
14-Oct	81.0	69.6	70.6	54.6	44.0	110.6	76.4	74.2	49.4
21-Oct	83.0	70.2	69.7	50.9	40.0	107.1	72.4	68.5	44.0
28-Oct	80.0	67.9	68.1	51.2	38.0	99.4	70.9	69.6	45.1
4-Nov	79.0	65.9	66.6	50.2	35.0	99.4	73.2	64.8	41.7
11-Nov	77.0	65.0	63.9	46.5	33.0	96.6	71.5	59.0	35.4
18-Nov	75.0	64.4	60.5	42.4	30.0	91.7	72.9	51.3	30.1
25-Nov	76.0	66.6	59.7	42.7	29.0	90.3	73.6	51.7	30.8
2-Dec	76.0	64.5	59.8	41.8	27.0	93.8	70.4	53.8	29.2
9-Dec	75.0	64.9	56.3	38.2	25.0	93.8	75.3	44.7	24.6
16-Dec	69.0	60.6	53.3	36.9	24.0	75.6	64.8	42.4	23.8
23-Dec	69.0	60.4	50.2	34.0	19.0	75.6	63.7	37.8	20.5
31-Dec	70.0	60.8	51.1	35.3	17.0	79.8	64.9	42.4	22.9



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	2	758
FEB	5	649
MAR	17	501
APR	52	263
MAY	131	97
JUN	285	13
JUL	425	1
AUG	380	2
SEP	236	21
OCT	69	172
NOV	22	375
DEC	6	637
ANN	1630	3489



	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	-22021	13	-4096
FEB	4	-18941	8	-3653
MAR	54	-15219	54	-2214
APR	240	-8643	127	-775
MAY	726	-3811	1795	-37
JUN	2044	-704	7127	0
JUL	3865	-114	14410	0
AUG	3003	-166	13079	0
SEP	1319	-1032	6599	-1
OCT	231	-6137	1417	-178
NOV	33	-11782	329	-1312
DEC	6	-18843	71	-3107
ANN	11525	-107413	45029	-15373

Average Annual Solar Radiation – Nearest Available Site

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

City: NORFOLK
 State: VA
 WBAN No: 13737
 Lat(N): 36.9
 Long(W): 76.2
 Elev(ft): 30

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.446
 Vert Gap: 0.302

AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Global	710	960	1290	1630	1830	1950	1860	1710	1420	1100	800	640	1330
	Std Dev	57	89	92	132	103	105	129	124	88	102	79	42	32
	Minimum	600	760	1080	1370	1580	1780	1640	1460	1230	830	610	550	1270
	Maximum	820	1140	1460	1930	2030	2130	2130	1940	1600	1260	930	710	1390
	Diffuse	310	410	530	670	790	840	840	760	620	460	330	290	570
Clear Day	Global	1020	1360	1810	2240	2500	2580	2500	2260	1880	1430	1060	900	1800
NORTH	Global	210	270	340	440	530	600	570	470	380	300	220	190	380
	Diffuse	210	270	340	430	490	520	510	460	380	300	220	190	360
Clear Day	Global	200	250	330	430	580	670	620	480	370	290	210	180	380
EAST	Global	470	610	780	940	990	1050	1000	950	820	680	530	430	770
	Diffuse	250	320	420	520	590	620	610	570	480	370	280	230	440
Clear Day	Global	750	940	1150	1320	1410	1410	1370	1290	1150	940	750	670	1100
SOUTH	Global	1080	1140	1090	950	790	720	740	880	1030	1160	1140	1040	980
	Diffuse	340	410	470	520	540	550	550	550	520	450	370	330	470
Clear Day	Global	1950	1950	1720	1310	980	830	880	1140	1500	1780	1870	1880	1480
WEST	Global	480	610	780	920	1000	1040	1000	940	840	680	520	430	770
	Diffuse	250	330	420	520	590	630	610	570	480	370	280	230	440
Clear Day	Global	750	940	1150	1320	1410	1410	1370	1290	1150	940	750	670	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

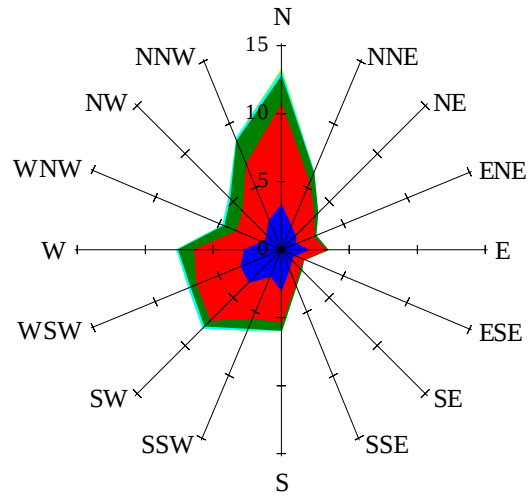
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	470	660	920	1180	1330	1420	1360	1240	1020	770	540	410	940
NORTH	Unshaded	140	190	240	300	350	390	370	320	270	210	160	130	260
	Shaded	130	170	220	270	320	350	340	290	240	190	140	120	230
EAST	Unshaded	330	430	550	670	700	740	710	670	580	480	370	290	540
	Shaded	300	390	490	600	610	650	620	590	520	430	340	270	480
SOUTH	Unshaded	810	830	750	600	480	430	450	550	690	820	850	780	670
	Shaded	790	770	610	420	350	350	380	520	740	830	770	770	570
WEST	Unshaded	330	430	550	650	710	730	700	670	590	480	360	300	540
	Shaded	300	390	500	580	620	640	620	590	530	430	330	270	480

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	41	75	85	67	28	45	83	100	96	68
	M.Cloudy	22	44	49	40	17	29	57	72	69	47
NORTH	M.Clear	10	14	15	13	8	20	17	17	17	15
	M.Cloudy	9	15	16	14	7	14	18	19	19	15
EAST	M.Clear	75	58	15	13	8	73	72	32	17	15
	M.Cloudy	24	30	16	14	7	34	45	27	19	15
SOUTH	M.Clear	38	70	79	64	27	12	28	42	38	18
	M.Cloudy	16	34	39	31	12	11	23	33	31	17
WEST	M.Clear	10	14	22	67	67	12	17	17	51	77
	M.Cloudy	9	15	19	33	22	11	18	19	39	45
M.Clear	(% hrs)	40	38	37	36	37	39	39	36	34	34
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	27	67	86	79	48	17	44	51	33	3
	M.Cloudy	16	42	57	54	31	10	26	29	19	3
NORTH	M.Clear	9	15	17	16	12	6	10	11	8	2
	M.Cloudy	7	15	18	17	12	4	10	11	8	1
EAST	M.Clear	59	69	29	16	12	45	41	11	8	2
	M.Cloudy	21	35	24	17	12	12	19	11	8	1
SOUTH	M.Clear	19	53	71	64	36	40	81	90	65	9
	M.Cloudy	10	29	43	40	21	12	31	35	23	3
WEST	M.Clear	9	15	17	52	71	6	10	22	51	13
	M.Cloudy	7	15	18	34	35	4	10	14	19	4
M.Clear	(% hrs)	40	41	39	38	40	36	34	35	36	38

Wind Summary - December, January, and February

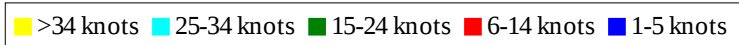
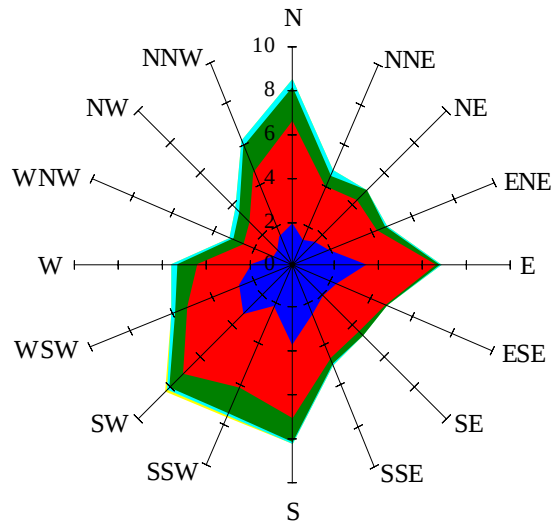
Labels of Percent Frequency on North Axis



Percent Calm = 10.64

Wind Summary - March, April, and May

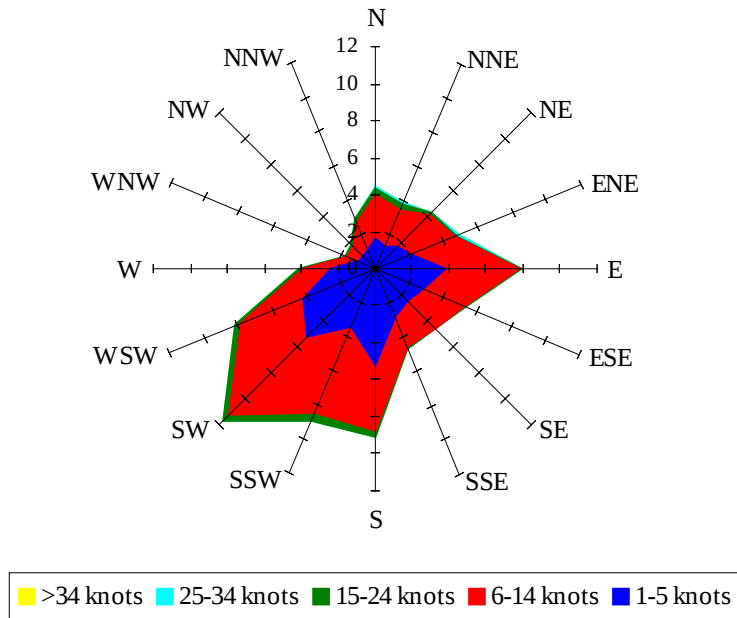
Labels of Percent Frequency on North Axis



Percent Calm = 8.30

Wind Summary - June, July, and August

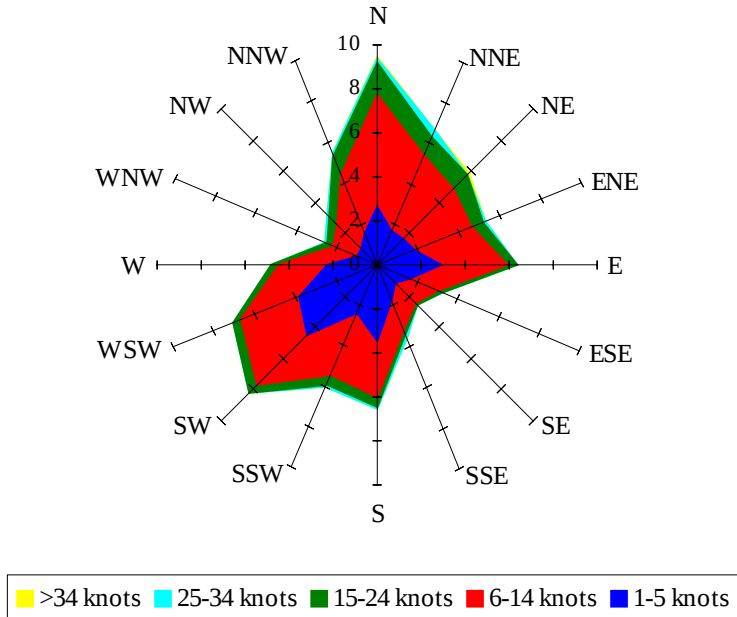
Labels of Percent Frequency on North Axis



Percent Calm = 11.50

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 13.40