

JOHNSTOWN/CAMBRIA PA

Latitude = 40.32 N

WMO No. 725127

Longitude = 78.83 W

Elevation = 2284 feet

Period of Record = 1973 to 1996

Average Pressure = 27.60 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	91	73	101	9.9	W
0.4% Occurrence	87	72	101	10.4	W
1.0% Occurrence	84	70	97	10.4	W
2.0% Occurrence	81	68	92	10.2	W
Mean Daily Range	15	-	-	-	-
97.5% Occurrence	11	10	8	13.5	WNW
99.0% Occurrence	6	5	6	13.3	WNW
99.6% Occurrence	1	0	4	13.4	WNW
Median of Extreme Lows	-6	-6	3	15.4	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	78	86	141	10.9	WSW
0.4% Occurrence	74	83	119	10.6	W
1.0% Occurrence	72	81	112	10.4	W
2.0% Occurrence	71	79	109	10.2	W
	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	142	83	0.88	10.2	WSW
0.4% Occurrence	124	79	0.77	9.9	W
1.0% Occurrence	116	76	0.72	10.2	W
2.0% Occurrence	111	75	0.69	9.5	W
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		2	267	69	684

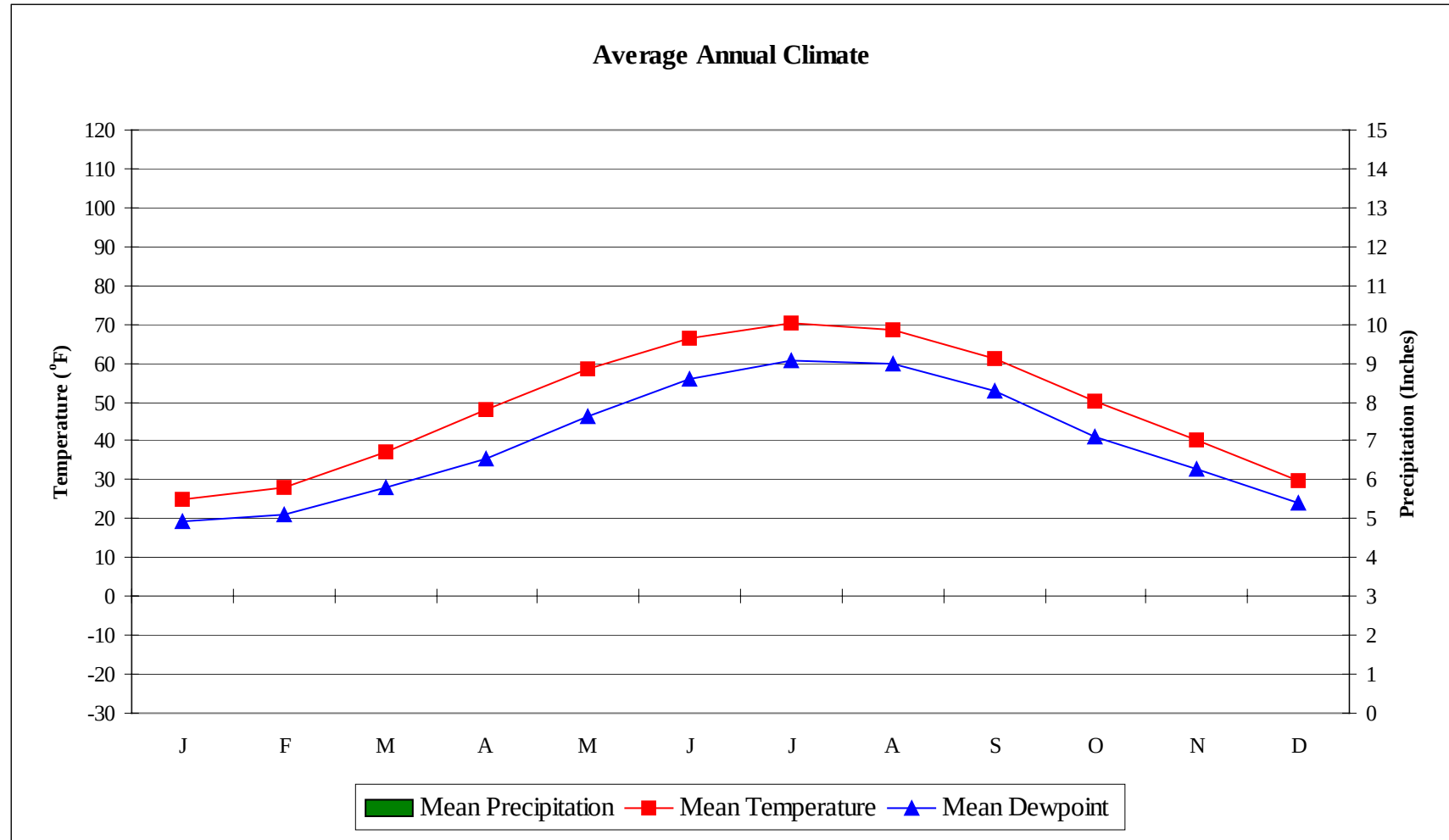
Other Site Data

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	2.6	90	0.8 + 0.2
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 (#)
51.2	N/A	N/A	53

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

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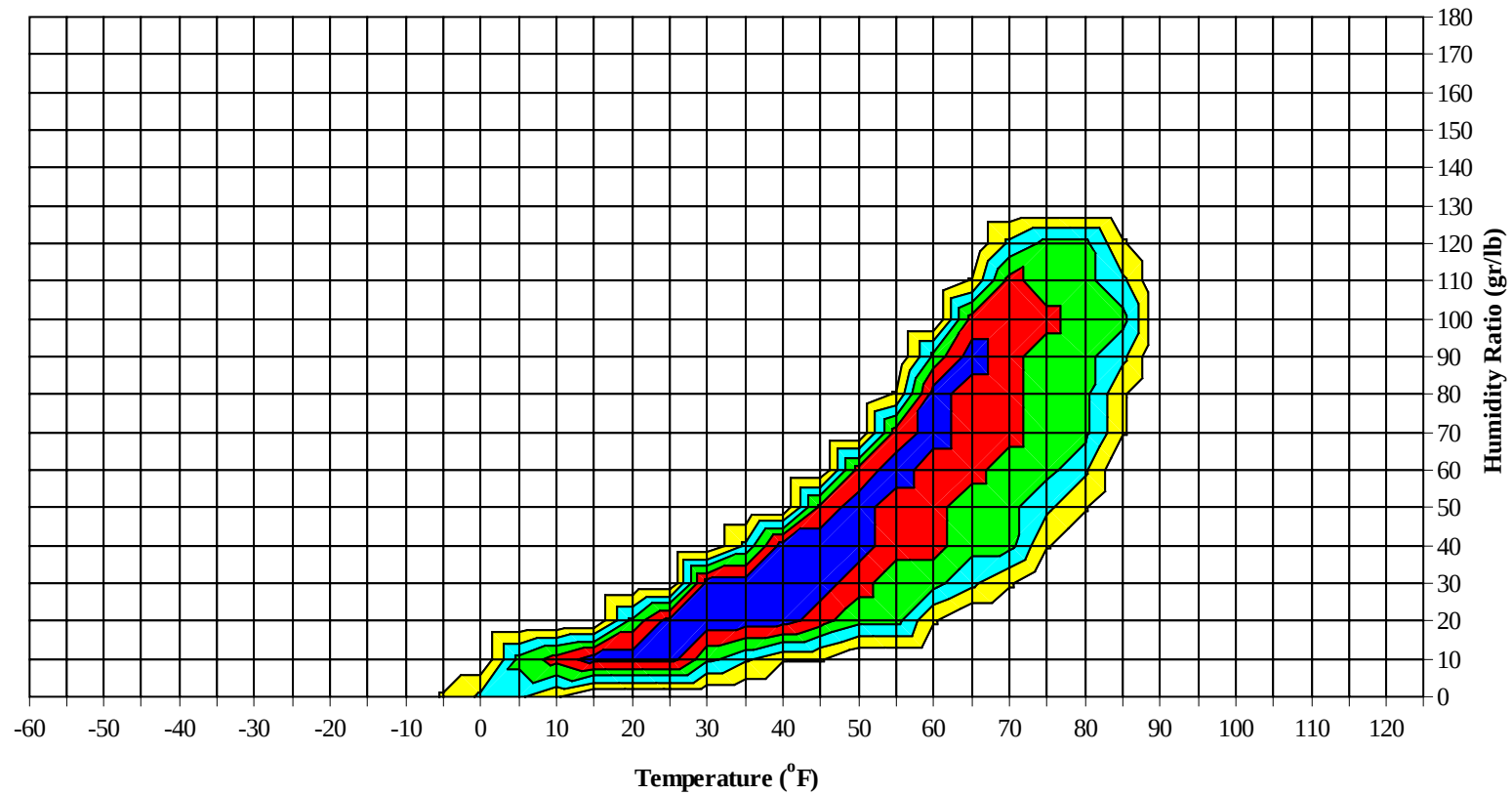


No Precipitation Data Available

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Long Term Psychrometric Summary

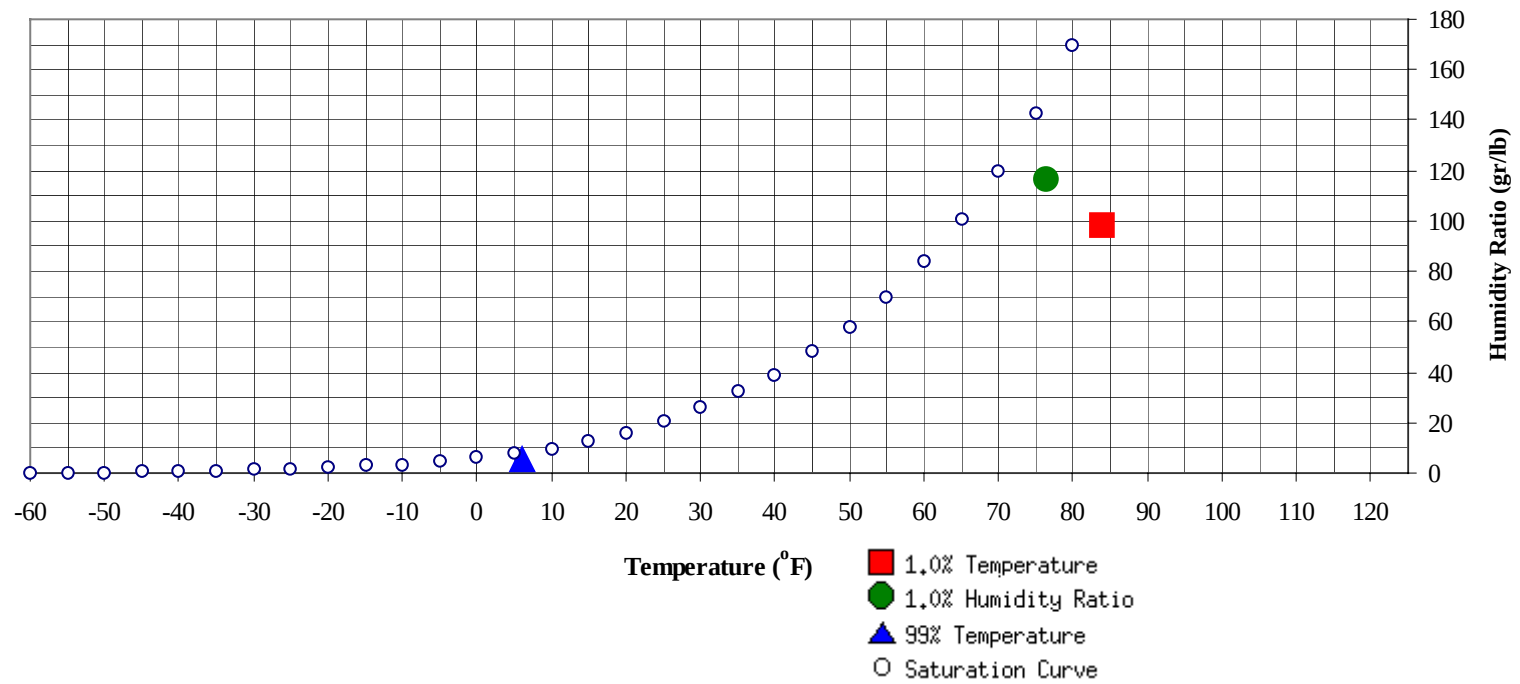


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

JOHNSTOWN/CAMBRIA PA

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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)
	6	5.9	2.3		116.2	76.3	71.1	69.1	36.5

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	84	98.1	70.3	35.6

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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		
95 / 99															
90 / 94															
85 / 89															
80 / 84												0		0	61.2
75 / 79												1	0	1	60.6
70 / 74												4	1	5	57.4
65 / 69		0		0	55.0		1		1	51.4		6	4	9	54.4
60 / 64		1	0	1	53.4		2	0	2	51.6	3	10	7	20	52.1
55 / 59	2	2	1	4	52.7		4	3	7	49.8	5	14	11	29	49.3
50 / 54	3	4	3	10	47.5	3	9	6	19	46.3	10	19	16	45	45.7
45 / 49	3	9	8	20	42.8	10	14	14	38	42.9	21	27	27	75	42.0
40 / 44	12	17	12	41	38.4	13	18	17	48	38.5	27	34	33	94	37.9
35 / 39	22	24	24	69	34.2	20	23	23	66	34.1	35	39	39	113	33.8
30 / 34	35	42	42	119	30.2	35	40	36	111	29.7	46	40	46	133	29.7
25 / 29	43	45	45	133	25.4	33	36	35	105	25.1	37	28	30	95	24.9
20 / 24	35	35	38	108	20.7	32	28	33	93	20.3	30	16	19	66	20.4
15 / 19	37	29	27	92	15.9	27	21	25	73	15.6	16	7	9	32	15.8
10 / 14	20	22	22	63	10.9	22	13	18	53	10.9	10	3	4	17	10.8
5 / 9	17	10	16	43	6.5	17	8	9	33	6.2	6	1	2	9	6.2
0 / 4	12	5	7	23	1.4	8	3	5	17	1.4	2	0	1	2	2.2
-5 / -1	3	2	3	8	-2.6	3	1	1	5	-3.2	0			0	-2.7
-10 / -6	2	2	1	4	-7.1	2	0	0	2	-7.0					
-15 / -11	2	1	1	3	-11.6	0			0	-11.0					
-20 / -16	2	0	0	2	-16.4										

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.

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															
90 / 94		0		0	62.0							1		1	71.9
85 / 89		1	0	1	62.5		2	0	2	69.3		10	1	11	70.8
80 / 84	0	4	1	5	62.3		15	3	18	65.5		26	9	35	68.4
75 / 79	0	7	3	10	59.9	0	22	12	34	63.1	1	46	24	71	65.7
70 / 74	0	13	7	20	57.6	5	32	22	59	60.8	13	53	48	114	63.7
65 / 69	3	18	13	33	55.1	15	39	36	90	58.0	53	49	65	167	61.3
60 / 64	12	22	20	55	52.0	35	39	45	119	55.2	75	31	51	156	57.8
55 / 59	23	30	30	83	49.2	51	35	44	130	51.6	48	15	26	89	53.3
50 / 54	27	33	34	94	45.6	44	30	36	111	47.6	31	6	12	48	49.2
45 / 49	33	30	35	98	41.6	43	22	27	92	43.5	13	2	4	20	44.5
40 / 44	39	31	33	103	38.0	35	11	16	61	39.4	5	1	1	7	40.3
35 / 39	42	26	29	97	33.9	15	3	6	24	34.8	0		0	0	34.8
30 / 34	33	17	23	73	30.1	4	0	1	5	30.5	0			0	29.3
25 / 29	18	6	6	31	25.6	0			0	24.9					
20 / 24	8	2	4	13	21.1										
15 / 19	2	1	1	3	16.3										
10 / 14	0		0	0	12.8										
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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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		
95 / 99		1	0	1	73.6										
90 / 94		4	1	5	72.9		2	0	2	73.0		0		0	71.7
85 / 89		18	4	22	72.0		12	2	14	71.7		2	0	2	72.7
80 / 84	0	41	18	59	69.6		33	10	43	69.8		11	1	12	69.4
75 / 79	3	61	39	102	67.5	1	55	31	88	67.6	0	25	8	33	66.8
70 / 74	36	64	73	173	65.5	20	67	62	148	65.4	4	41	24	69	64.2
65 / 69	87	36	66	189	63.3	73	47	76	197	63.1	29	47	49	124	61.9
60 / 64	75	17	36	127	59.2	84	23	44	151	59.3	50	46	52	148	57.9
55 / 59	33	6	11	50	54.7	45	7	18	69	54.7	50	36	48	135	53.3
50 / 54	12	1	1	14	50.1	17	2	4	23	49.7	49	22	34	106	49.1
45 / 49	3		0	3	45.4	5	0	1	6	45.1	31	8	17	56	44.4
40 / 44	0			0	42.0	1		0	1	39.8	16	2	6	25	40.0
35 / 39						0			0	32.0	8	0	1	9	35.5
30 / 34											1			1	31.8
25 / 29											0			0	23.7
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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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		
95 / 99															
90 / 94															
85 / 89															
80 / 84		0		0	70.0										
75 / 79		4		4	63.1		0		0	63.0					
70 / 74		13	3	16	60.6		2		2	59.6					
65 / 69	1	25	11	37	57.8	0	6	1	7	57.5		0		0	58.6
60 / 64	14	34	27	75	55.7	3	14	9	27	54.7	0	2	1	3	56.0
55 / 59	30	38	38	106	51.6	13	22	16	50	51.8	3	6	3	12	52.9
50 / 54	41	37	43	121	47.5	19	23	24	66	47.2	8	9	9	26	48.6
45 / 49	42	41	46	130	43.0	26	27	31	84	42.6	10	15	12	37	43.2
40 / 44	46	31	42	119	39.0	27	35	31	94	38.4	13	21	17	51	38.6
35 / 39	49	18	26	93	34.8	40	36	36	113	34.1	29	37	31	97	34.3
30 / 34	20	5	11	36	30.5	45	41	50	136	30.0	50	50	52	152	30.1
25 / 29	4	1	1	6	26.0	38	23	28	90	25.5	48	45	48	141	25.4
20 / 24	1	0	0	1	20.6	21	7	11	39	20.8	32	27	31	90	20.7
15 / 19	0			0	16.0	6	1	3	10	16.7	23	18	21	62	15.9
10 / 14						2	1	0	2	11.0	18	11	14	42	11.0
5 / 9						0	0	0	0	6.8	8	5	7	20	6.4
0 / 4						0		0	0	3.0	5	2	3	9	1.7
-5 / -1											2	1	0	2	-2.6
-10 / -6											0	0	0	0	-6.9
-15 / -11											0	0	0	0	-11.7
-20 / -16															

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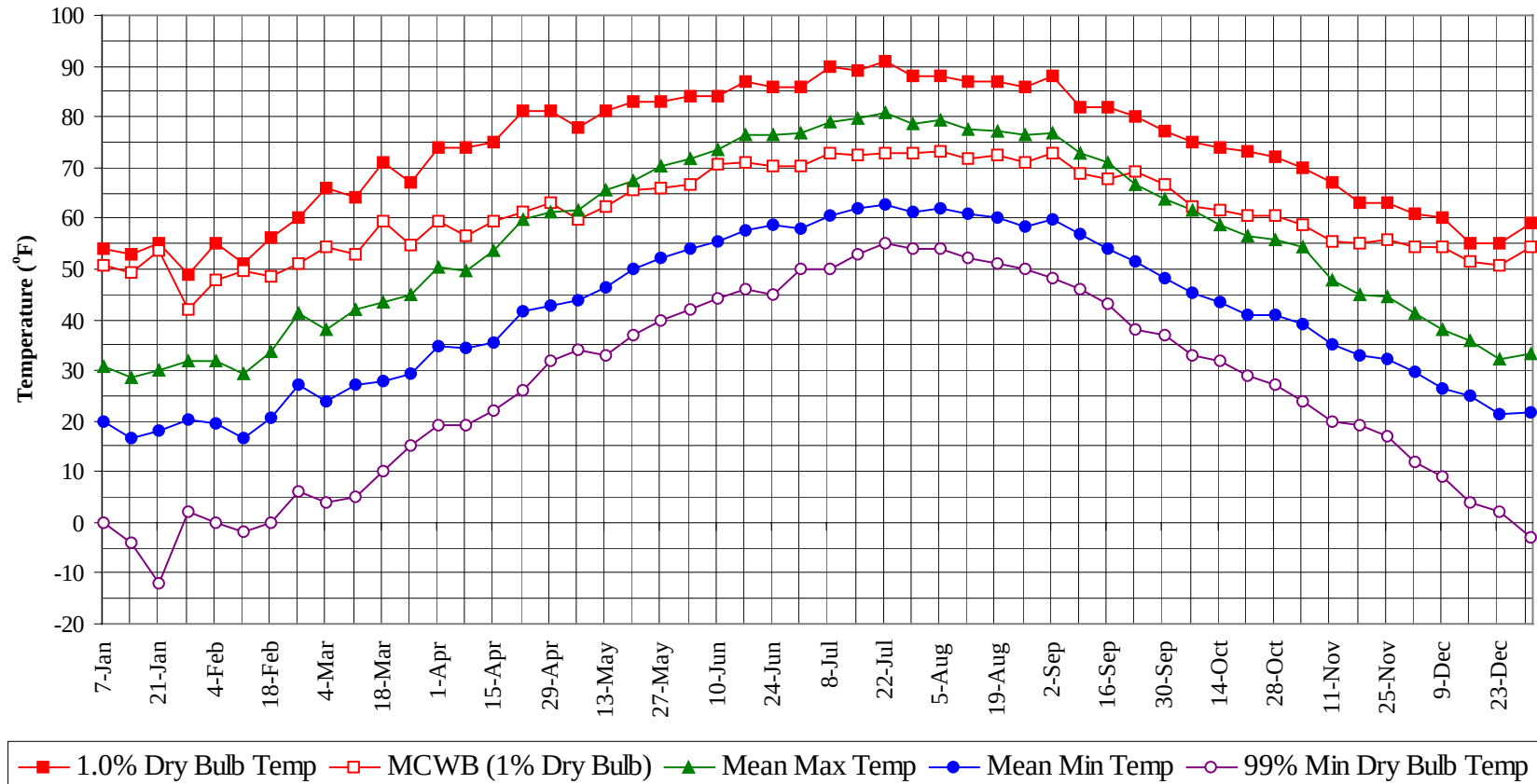
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

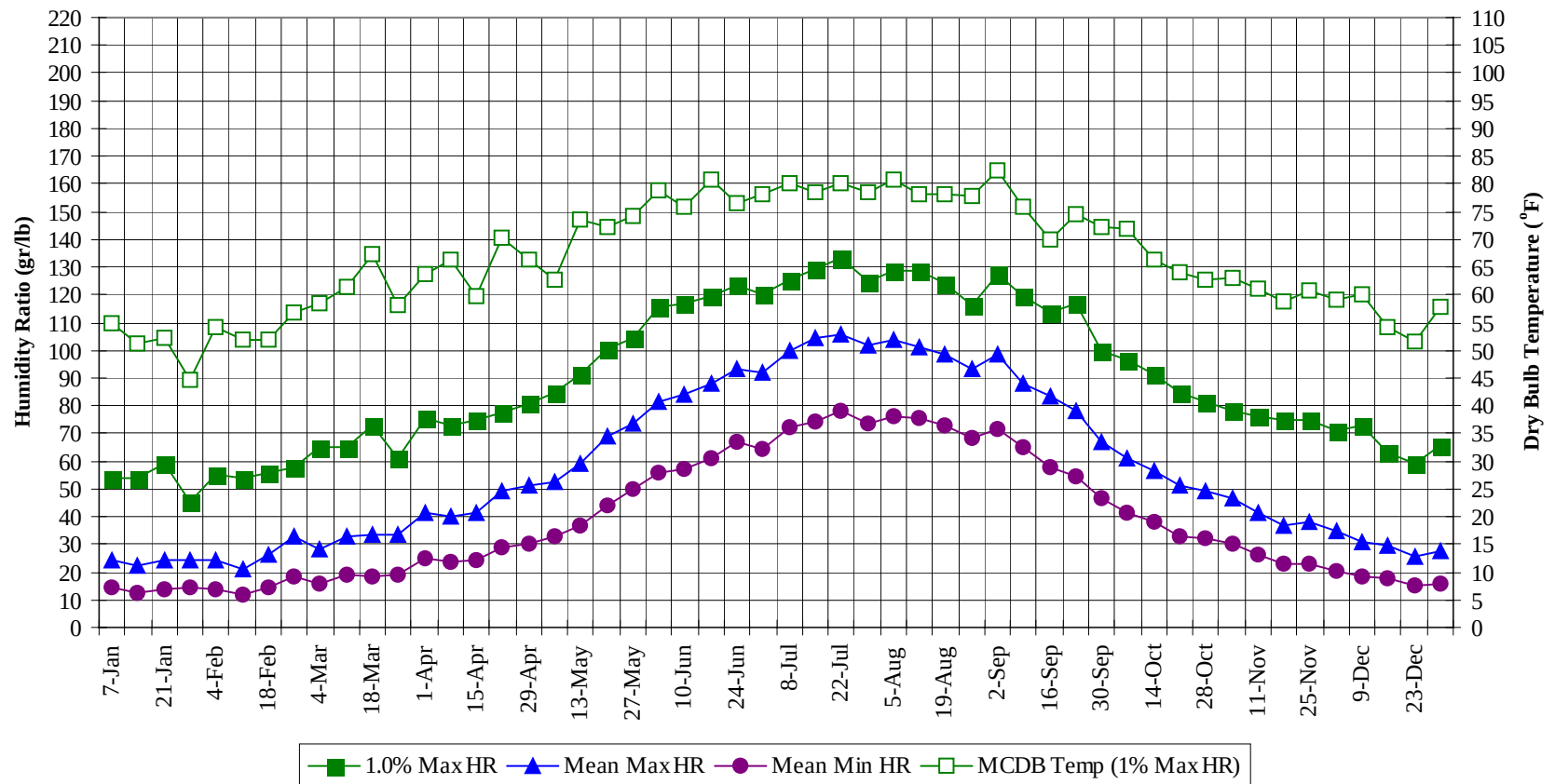
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		1	0	1	73.6
90 / 94		7	1	8	72.8
85 / 89		44	7	52	71.5
80 / 84	0	129	39	168	68.8
75 / 79	6	220	109	335	66.3
70 / 74	86	287	225	598	64.0
65 / 69	285	272	306	863	61.2
60 / 64	380	239	281	900	57.0
55 / 59	322	214	241	777	52.2
50 / 54	278	197	221	696	47.5
45 / 49	247	198	224	670	42.9
40 / 44	234	199	212	645	38.6
35 / 39	250	206	223	679	34.2
30 / 34	248	237	272	757	30.0
25 / 29	202	185	204	591	25.3
20 / 24	143	117	144	404	20.6
15 / 19	98	77	91	267	15.9
10 / 14	63	49	61	173	10.9
5 / 9	42	25	34	102	6.4
0 / 4	22	10	16	47	1.5
-5 / -1	7	3	4	14	-2.8
-10 / -6	4	2	2	9	-7.1
-15 / -11	1	1	1	3	-11.6
-20 / -16	1	0	0	1	-16.4
		</			

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



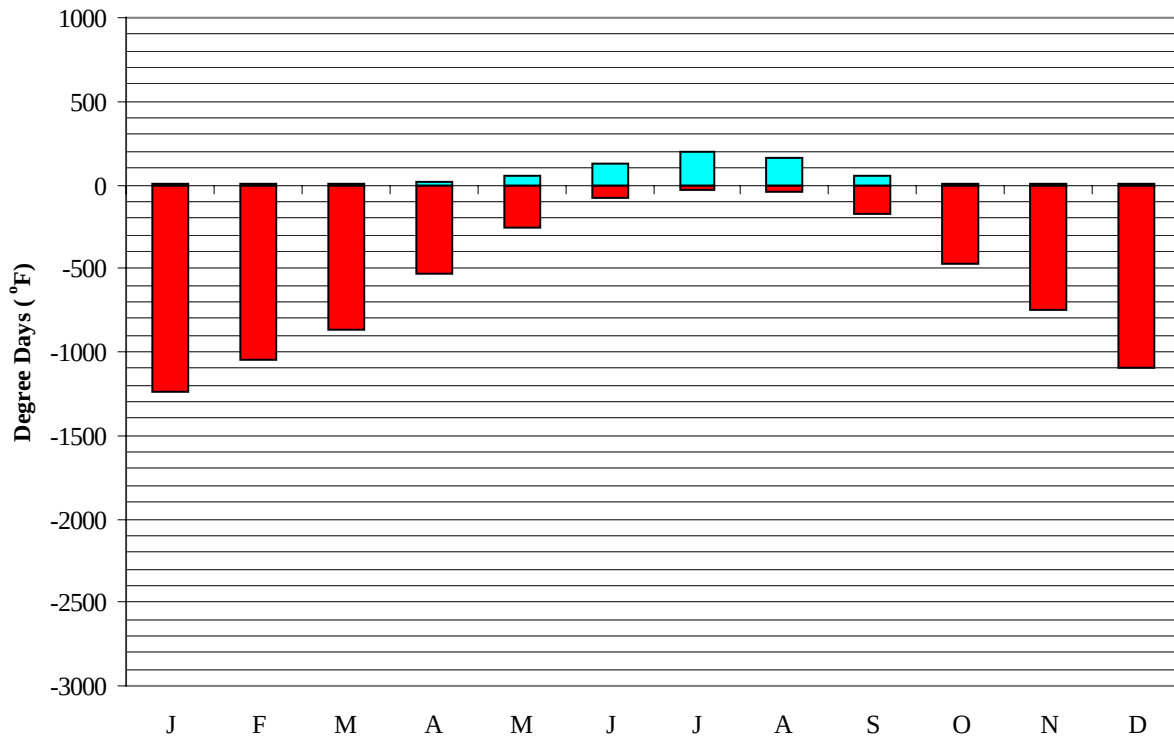
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Long Term Dry Bulb Temperature and Humidity Summary

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	54.0	50.6	30.7	19.8	0.0	53.9	54.7	24.2	14.2
14-Jan	53.0	49.1	28.6	16.7	-4.0	53.9	51.3	22.0	12.2
21-Jan	55.0	53.6	30.2	17.9	-12.0	58.8	52.2	24.4	13.8
28-Jan	49.0	42.1	32.0	20.1	2.0	45.5	44.8	24.1	14.3
4-Feb	55.0	47.7	31.7	19.6	0.0	55.3	54.3	24.1	13.6
11-Feb	51.0	49.6	29.2	16.7	-2.0	53.9	51.8	21.2	11.5
18-Feb	56.0	48.5	33.8	20.6	0.0	56.0	51.8	26.3	14.7
25-Feb	60.0	50.9	41.1	27.0	6.0	58.1	56.9	32.9	18.7
4-Mar	66.0	54.2	38.1	23.9	4.0	65.1	58.4	28.4	15.9
11-Mar	64.0	52.8	41.8	27.3	5.0	65.1	61.3	32.9	19.1
18-Mar	71.0	59.5	43.4	27.9	10.0	72.8	67.3	33.6	18.5
25-Mar	67.0	54.7	45.0	29.2	15.0	60.9	58.2	33.5	18.8
1-Apr	74.0	59.6	50.5	34.9	19.0	75.6	63.6	41.1	24.9
8-Apr	74.0	56.4	49.7	34.4	19.0	72.8	66.4	40.1	23.9
15-Apr	75.0	59.3	53.7	35.6	22.0	74.9	59.8	41.6	24.0
22-Apr	81.0	61.2	59.9	41.6	26.0	77.7	70.3	49.0	29.2
29-Apr	81.0	62.9	61.3	42.6	32.0	80.5	66.2	51.2	30.5
6-May	78.0	59.6	61.5	43.8	34.0	84.7	62.7	52.8	32.7
13-May	81.0	62.2	65.5	46.3	33.0	91.0	73.7	59.0	36.5
20-May	83.0	65.6	67.5	50.1	37.0	100.8	72.4	68.7	44.3
27-May	83.0	65.9	70.2	52.2	40.0	104.3	74.2	73.6	49.9
3-Jun	84.0	66.8	71.9	54.0	42.0	115.5	78.7	81.4	56.0
10-Jun	84.0	70.5	73.7	55.3	44.0	116.9	76.0	84.2	57.3
17-Jun	87.0	71.1	76.5	57.5	46.0	119.7	80.8	88.1	61.2
24-Jun	86.0	70.3	76.4	58.8	45.0	123.2	76.6	93.4	66.8
1-Jul	86.0	70.3	76.7	58.0	50.0	120.4	78.0	92.3	64.6
8-Jul	90.0	72.9	79.0	60.5	50.0	125.3	80.2	99.8	72.4
15-Jul	89.0	72.5	79.7	61.9	53.0	129.5	78.4	104.2	73.9
22-Jul	91.0	72.9	80.8	62.7	55.0	133.0	80.1	105.4	78.3
29-Jul	88.0	72.7	78.6	61.3	54.0	124.6	78.5	101.6	73.4
5-Aug	88.0	73.1	79.3	61.8	54.0	128.8	80.9	103.8	75.9
12-Aug	87.0	71.6	77.5	60.9	52.0	128.8	78.2	101.3	75.6
19-Aug	87.0	72.4	77.1	60.2	51.0	123.9	78.3	98.4	73.2
26-Aug	86.0	70.9	76.4	58.2	50.0	116.2	77.7	93.6	68.0
2-Sep	88.0	72.8	76.6	59.6	48.0	127.4	82.5	98.3	71.9
9-Sep	82.0	68.8	72.9	56.7	46.0	119.7	75.7	88.0	64.8
16-Sep	82.0	67.9	71.0	54.0	43.0	113.4	69.9	83.5	57.9
23-Sep	80.0	69.1	66.6	51.4	38.0	116.9	74.4	77.9	54.3
30-Sep	77.0	66.7	63.8	48.1	37.0	100.1	72.2	66.9	46.5
7-Oct	75.0	62.2	61.5	45.3	33.0	96.6	71.8	61.2	41.2
14-Oct	74.0	61.4	58.7	43.3	32.0	91.0	66.3	56.3	38.0
21-Oct	73.0	60.6	56.4	41.1	29.0	84.7	64.0	51.1	33.1
28-Oct	72.0	60.4	55.8	40.8	27.0	81.2	62.9	49.3	32.2
4-Nov	70.0	58.7	54.3	39.2	24.0	78.4	63.0	46.4	29.9
11-Nov	67.0	55.4	47.9	35.1	20.0	76.3	60.9	41.1	26.6
18-Nov	63.0	55.1	44.7	33.1	19.0	74.9	58.9	36.9	23.3
25-Nov	63.0	55.6	44.5	32.2	17.0	74.9	60.8	38.0	23.3
2-Dec	61.0	54.3	41.3	29.6	12.0	70.7	59.1	35.0	20.5
9-Dec	60.0	54.2	38.2	26.5	9.0	72.8	60.1	31.0	18.5
16-Dec	55.0	51.5	35.9	25.0	4.0	63.0	54.1	29.7	17.8
23-Dec	55.0	50.9	32.3	21.5	2.0	58.8	51.6	25.5	15.0
31-Dec	59.0	54.3	33.4	21.7	-3.0	65.8	57.9	27.5	15.9

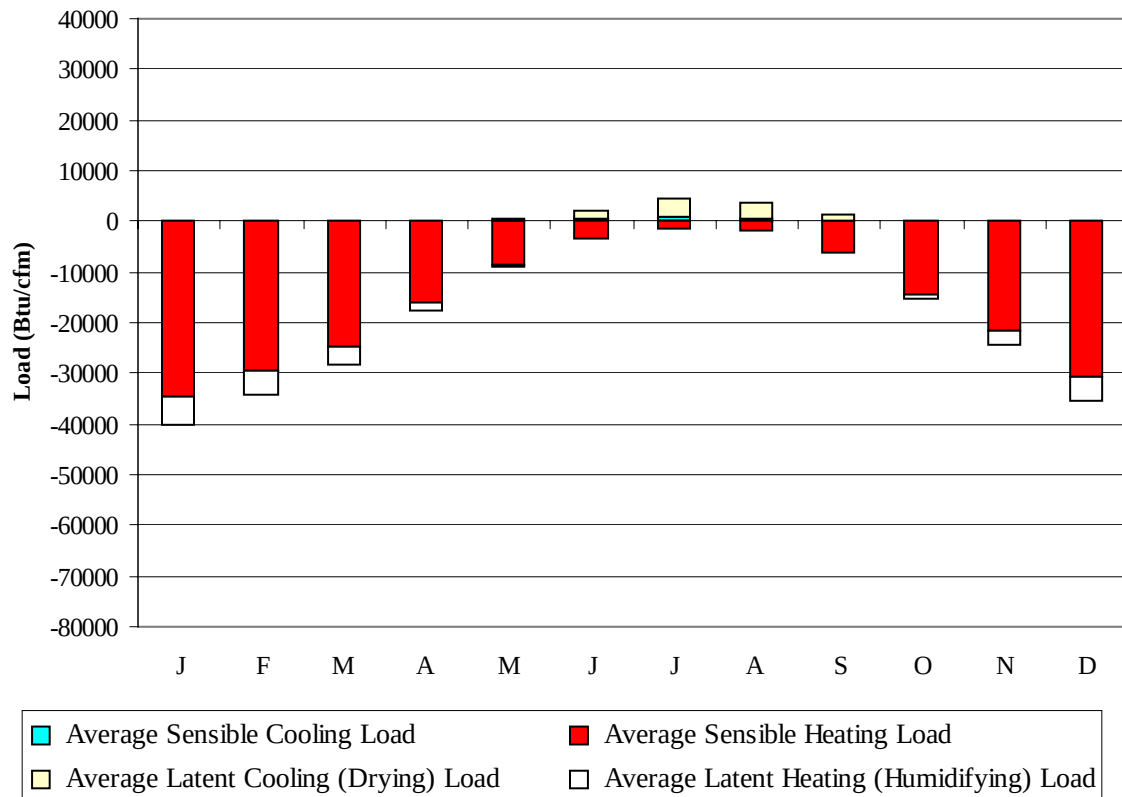
Degree Days, Heating and Cooling (Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1241
FEB	0	1047
MAR	3	865
APR	18	531
MAY	54	262
JUN	122	80
JUL	197	29
AUG	161	43
SEP	58	178
OCT	9	473
NOV	1	748
DEC	0	1094
ANN	622	6591

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 Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-34596	0	-5659
FEB	0	-29342	0	-4789
MAR	4	-24794	1	-3647
APR	54	-15901	8	-1854
MAY	185	-8659	285	-396
JUN	499	-3247	1493	-18
JUL	963	-1463	3347	-1
AUG	672	-2023	2861	-2
SEP	157	-6298	1061	-53
OCT	4	-14544	44	-824
NOV	0	-21707	3	-2495
DEC	0	-30759	0	-4669
ANN	2538	-193333	9103	-24407

Average Annual Solar Radiation – Nearest Available Site

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

City: PITTSBURGH
 State: PA
 WBAN No: 94823
 Lat(N): 40.5
 Long(W): 80.22
 Elev(ft): 1224

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.548
 Vert Gap: 0.323

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	550	790	1110	1450	1730	1920	1880	1660	1330	960	580	440	1200
	Std Dev	43	68	83	146	148	118	133	90	104	72	59	34	36
	Minimum	430	690	960	1120	1430	1610	1670	1480	1160	790	470	370	1130
	Maximum	620	980	1340	1720	1980	2160	2120	1850	1540	1210	680	500	1280
	Diffuse	370	500	640	770	910	980	970	850	680	490	370	320	650
Clear Day	Global	860	1210	1680	2180	2480	2600	2520	2240	1800	1310	900	750	1710
NORTH	Global	200	280	360	440	550	630	600	500	390	290	210	170	390
	Diffuse	200	280	360	440	520	560	550	480	390	290	210	170	370
Clear Day	Global	190	250	330	440	580	680	630	480	360	280	200	170	380
EAST	Global	350	480	660	840	970	1050	1050	950	800	610	370	280	700
	Diffuse	240	330	430	530	620	670	660	590	490	360	250	200	450
Clear Day	Global	630	840	1080	1310	1410	1440	1410	1300	1130	880	660	570	1060
SOUTH	Global	740	880	950	900	830	800	830	930	1020	1040	740	600	850
	Diffuse	350	440	510	550	590	620	620	600	550	450	340	300	490
Clear Day	Global	1800	1890	1770	1430	1110	960	1020	1260	1590	1790	1760	1710	1510
WEST	Global	340	490	660	820	960	1050	1020	950	780	590	370	280	690
	Diffuse	240	330	440	540	620	680	670	600	490	360	250	200	450
Clear Day	Global	630	840	1080	1310	1410	1440	1410	1300	1130	880	660	570	1060

Average Annual Solar Heat and Illumination – Nearest Available Site

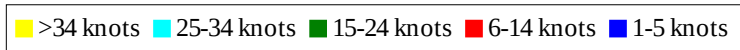
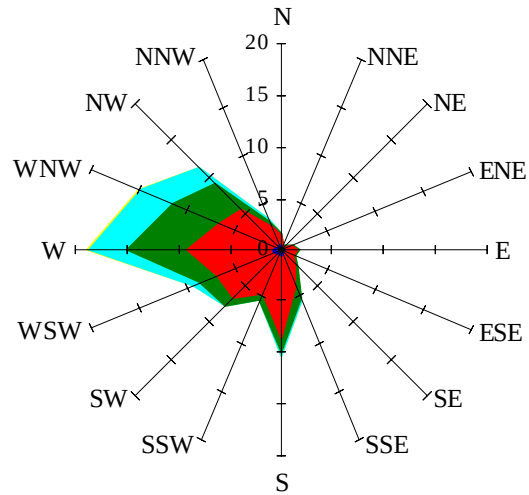
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	360	540	780	1040	1250	1390	1360	1190	950	660	390	290	850
NORTH	Unshaded	140	190	250	300	370	420	400	340	270	200	140	120	260
	Shaded	120	160	220	270	320	360	350	300	240	180	120	100	230
EAST	Unshaded	240	340	460	600	690	750	750	680	570	420	250	190	500
	Shaded	210	290	400	510	580	630	630	580	490	370	220	170	420
SOUTH	Unshaded	550	640	660	600	530	500	520	600	700	750	550	440	590
	Shaded	520	580	520	400	360	370	380	390	500	650	520	420	470
WEST	Unshaded	240	340	460	580	680	750	730	680	560	420	250	190	490
	Shaded	210	300	400	490	570	630	610	580	480	360	220	160	420

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	32	67	80	67	31	40	79	99	96	72
	M.Cloudy	18	40	48	40	19	25	53	70	71	51
NORTH	M.Clear	9	14	15	14	9	19	16	17	18	16
	M.Cloudy	8	15	17	15	8	13	17	20	20	17
EAST	M.Clear	67	61	16	14	9	70	75	39	18	16
	M.Cloudy	20	29	17	15	8	29	43	31	20	17
SOUTH	M.Clear	32	69	82	69	31	11	30	47	45	26
	M.Cloudy	13	32	39	32	13	10	23	36	36	21
WEST	M.Clear	9	14	16	61	65	11	16	17	45	75
	M.Cloudy	8	15	17	29	22	10	17	20	36	45
M.Clear	(% hrs)	24	22	24	20	23	36	32	24	22	26
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	21	60	81	77	50	9	35	44	30	3
	M.Cloudy	12	37	55	53	33	5	19	25	17	3
NORTH	M.Clear	7	14	17	16	13	4	9	11	9	2
	M.Cloudy	6	14	18	17	13	3	8	10	7	1
EAST	M.Clear	51	70	36	16	13	25	39	11	9	2
	M.Cloudy	15	32	27	17	13	6	14	10	7	1
SOUTH	M.Clear	15	52	74	69	42	21	70	83	61	9
	M.Cloudy	7	26	44	42	24	5	20	25	17	2
WEST	M.Clear	7	14	17	46	68	4	9	16	42	11
	M.Cloudy	6	14	18	31	34	3	8	11	14	3
M.Clear	(% hrs)	40	39	28	25	31	16	15	15	14	16

Wind Summary - December, January, and February

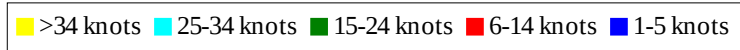
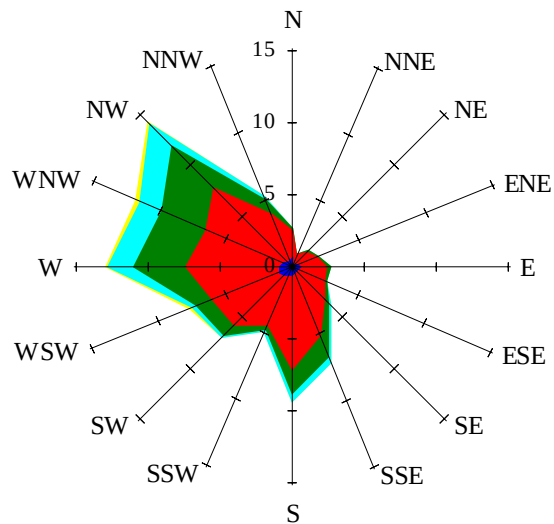
Labels of Percent Frequency on North Axis



Percent Calm = 4.57

Wind Summary - March, April, and May

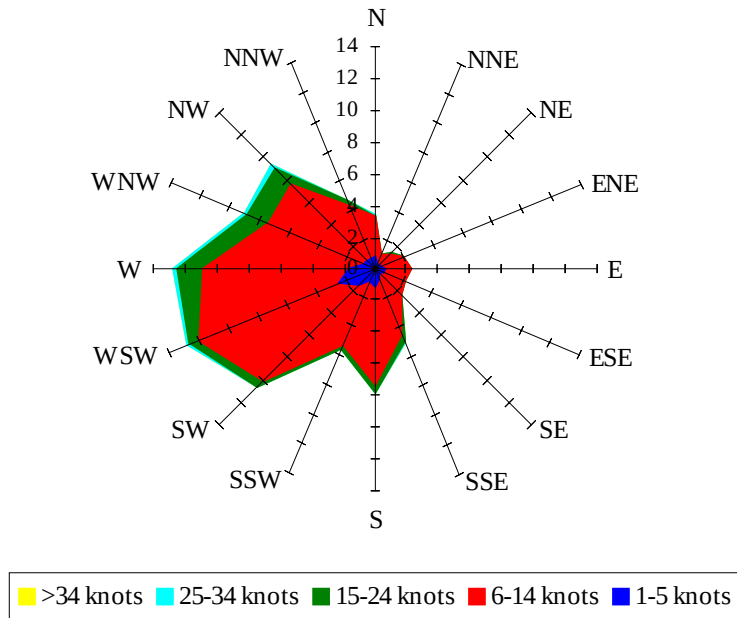
Labels of Percent Frequency on North Axis



Percent Calm = 4.78

Wind Summary - June, July, and August

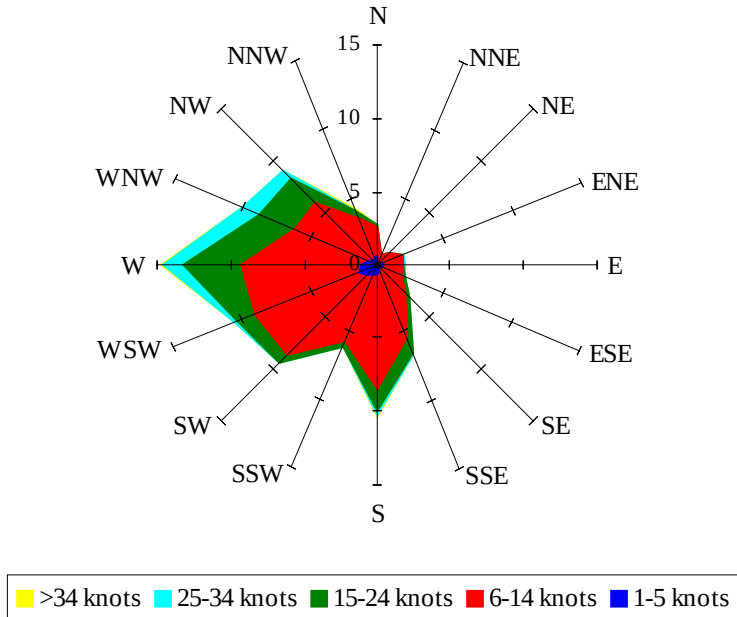
Labels of Percent Frequency on North Axis



Percent Calm = 8.71

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 5.28