

PITTSBURGH INTL PA

Latitude = 40.50 N

WMO No. 725200

Longitude = 80.22 W

Elevation = 1224 feet

Period of Record = 1973 to 1996

Average Pressure = 28.71 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	92	74	104	10.8	W
0.4% Occurrence	89	73	99	10.3	WSW
1.0% Occurrence	86	71	94	10.1	SW
2.0% Occurrence	84	69	88	9.5	W
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	13	11	7	10.3	W
99.0% Occurrence	7	6	5	9.9	W
99.6% Occurrence	1	0	4	9.9	W
Median of Extreme Lows	-3	-4	3	9.5	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	90	131	11.4	W
0.4% Occurrence	75	86	118	9.8	SW
1.0% Occurrence	73	82	112	9.2	SW
2.0% Occurrence	72	80	109	8.9	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	141	87	0.90	6.9	NE
0.4% Occurrence	123	81	0.79	7.7	WSW
1.0% Occurrence	116	78	0.74	8.7	SW
2.0% Occurrence	111	77	0.72	7.7	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		11	466	140	896

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	2.5	90	1.1 + 0.4
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 (#)
53.4	49	20	56

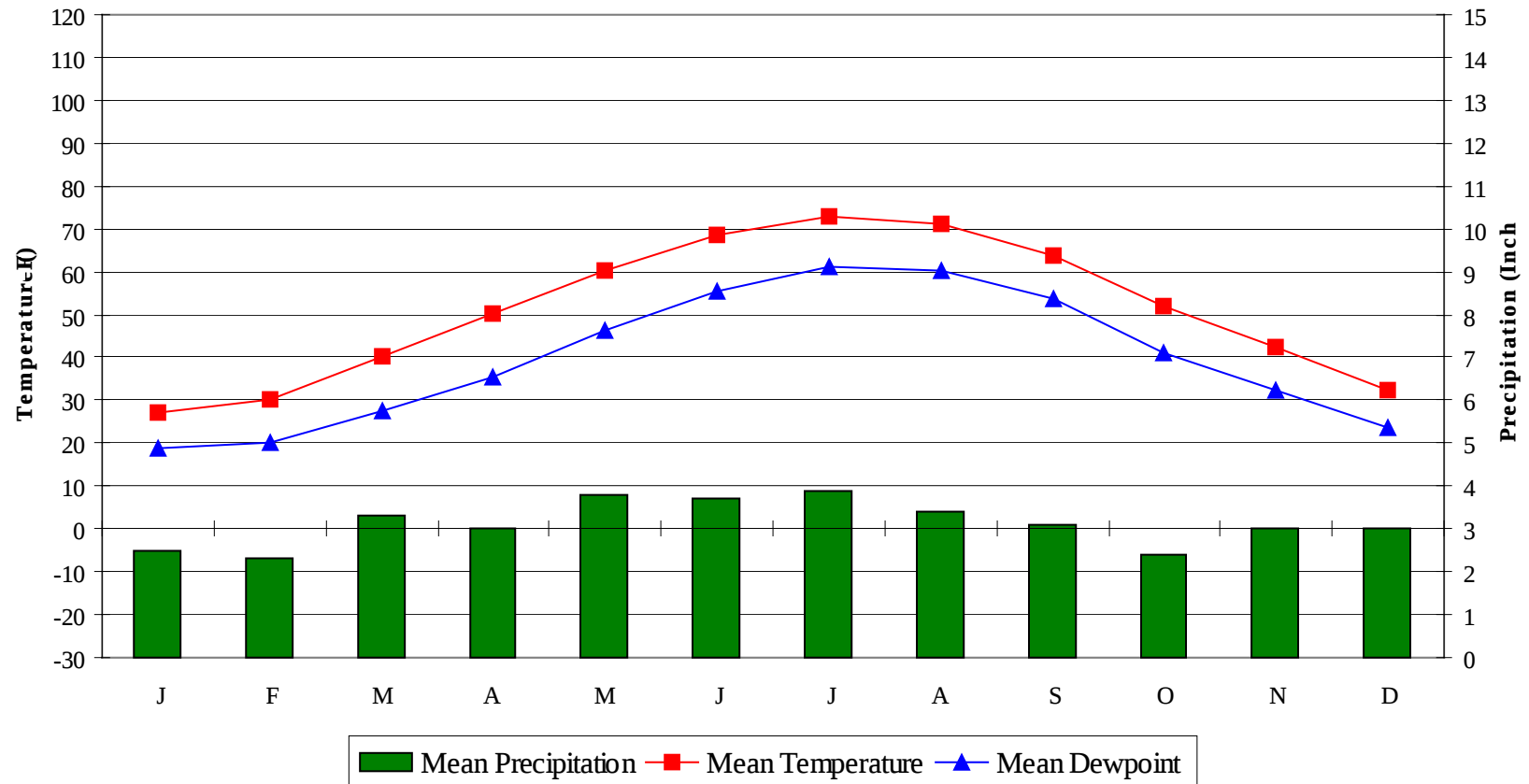
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

PITTSBURGH INTL

PA

WMO No. 725200

Average Annual Climate

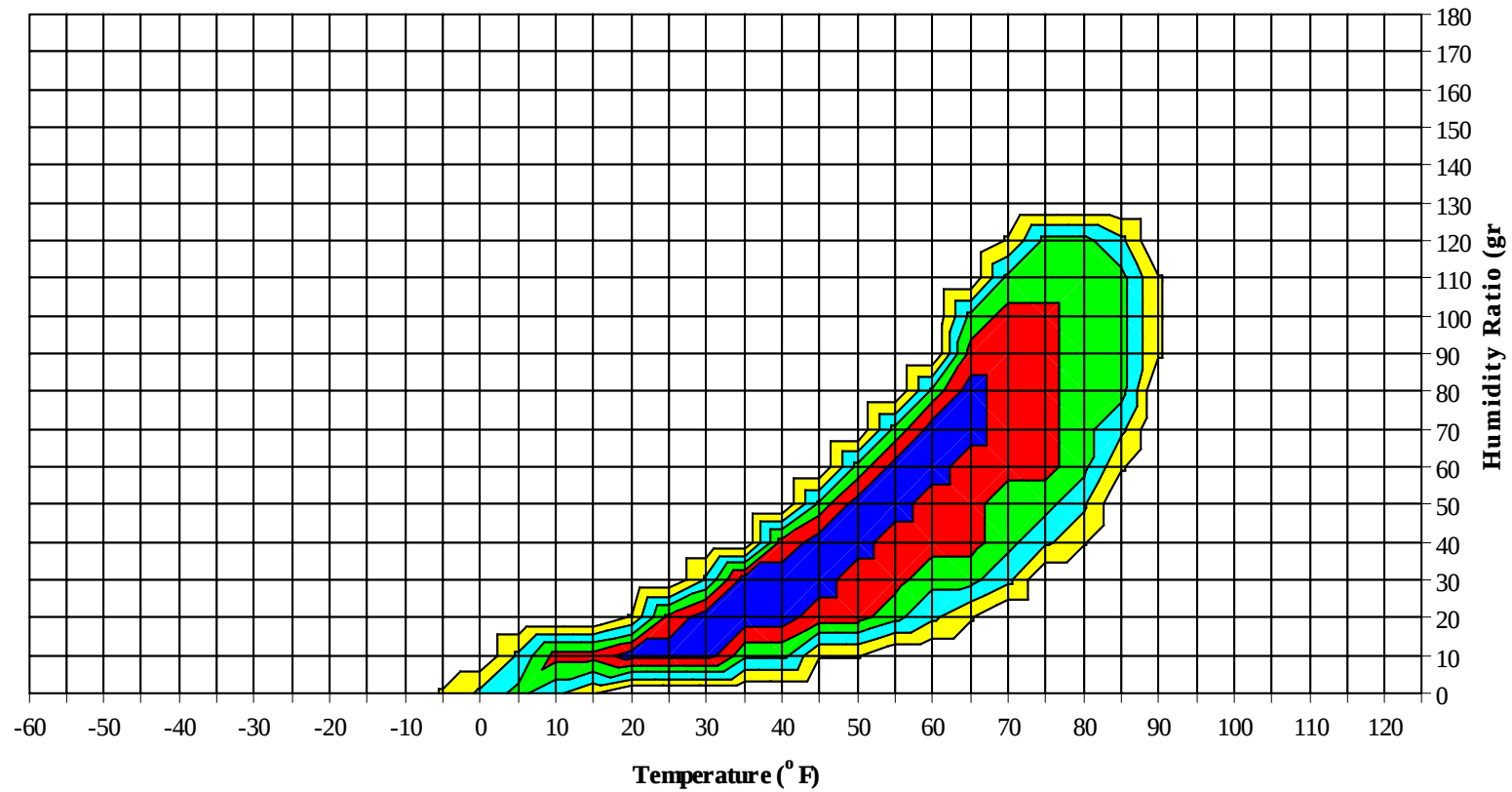


PITTSBURGH INTL

PA

WMO No. 725200

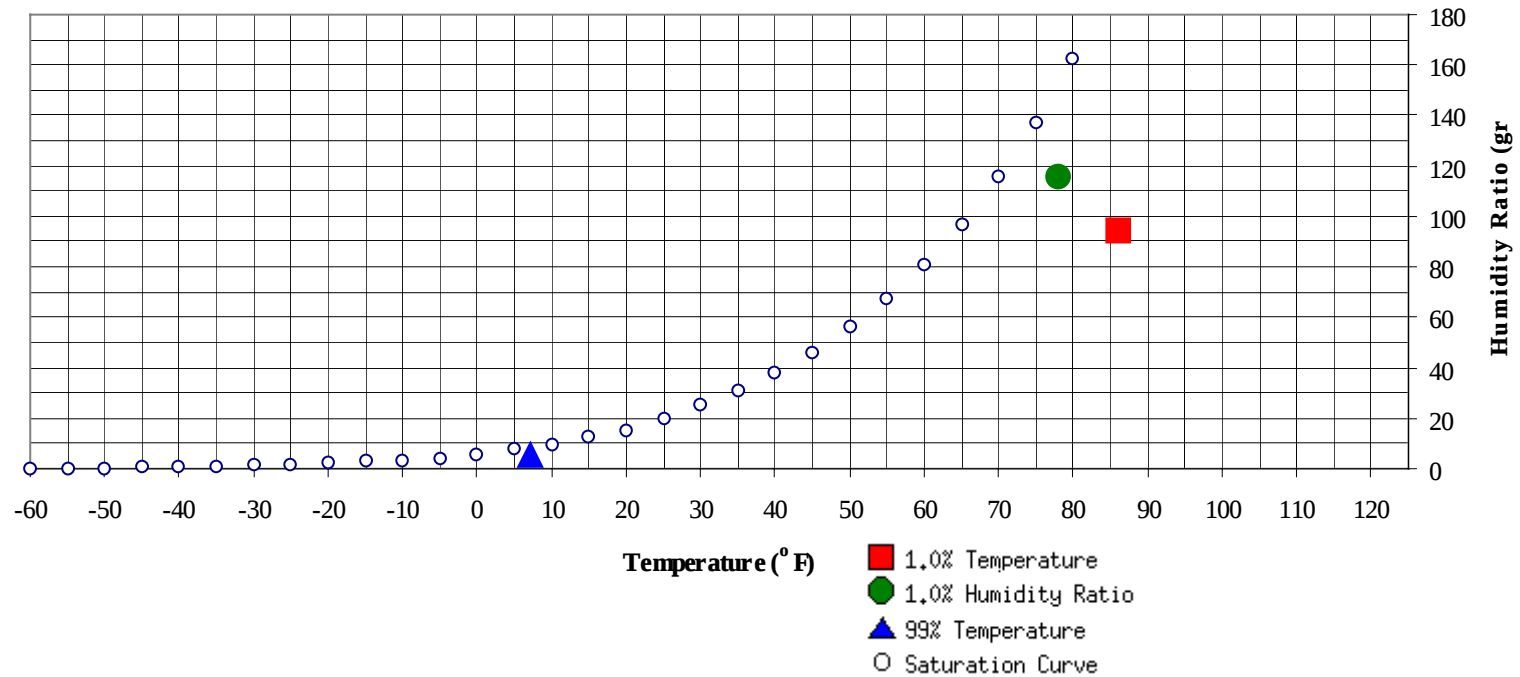
Long Term Psychrometric Summary



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

PITTSBURGH INTL PA

WMO No. 725200

Psychrometric Summary of Peak Design Values

	(°F)	MCHR	Enthalpy	1.0% Humidity	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	7	5.4	2.5	Ratio	115.5	78.1	72.4	70	36.8

	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
1.0% Dry Bulb	86	94.1	70.9	35.4

PITTSBURGH INTL PA

WMO No. 725200

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															
80 / 84												0	0	0	58.8
75 / 79												3	1	4	59.3
70 / 74												8	4	12	56.3
65 / 69		1	0	1	56.6		1	0	1	54.3	1	9	7	17	54.3
60 / 64	0	2	1	3	54.1	0	4	2	7	51.6	4	13	11	29	51.8
55 / 59	2	4	2	9	50.9	2	7	5	14	48.9	11	18	19	47	48.8
50 / 54	3	7	5	15	46.2	5	11	10	25	45.5	14	27	24	66	45.0
45 / 49	8	13	11	32	41.9	11	18	16	45	41.7	22	29	29	80	41.4
40 / 44	13	17	19	50	37.8	15	20	21	56	37.4	30	35	36	101	36.9
35 / 39	24	34	31	88	33.6	26	33	32	91	33.2	39	35	37	111	32.8
30 / 34	46	49	50	144	29.2	37	39	39	115	28.8	44	35	42	120	28.7
25 / 29	41	38	40	118	24.5	33	31	32	96	23.9	41	19	21	81	24.2
20 / 24	34	30	30	94	20.0	33	26	27	85	19.5	22	9	11	42	19.9
15 / 19	27	24	26	77	15.1	23	17	20	60	15.3	11	3	4	19	15.3
10 / 14	20	14	17	51	10.6	16	11	11	39	10.4	5	2	2	9	10.6
5 / 9	14	7	8	30	6.2	13	5	6	24	6.0	3	0	1	4	6.2
0 / 4	7	4	5	16	1.1	7	2	2	11	1.3	1	0	0	1	2.0
-5 / -1	4	2	2	8	-3.2	4	0	0	5	-2.8	0			0	-1.0
-10 / -6	2	1	2	5	-7.5	1	0	0	1	-6.5					
-15 / -11	1	1	1	2	-12.3	0			0						
-20 / -16	1	0	0	1	-17.4										
-25 / -21	0			0	-20.8										

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.

PITTSBURGH INTL PA

WMO No. 725200

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	75.1
90 / 94							0		0	72.0		3	1	4	73.2
85 / 89		1	0	1	64.1		5	2	7	68.4	0	19	6	25	70.2
80 / 84		6	2	8	61.8	0	20	9	29	65.5	1	43	21	65	67.6
75 / 79	0	12	6	18	60.3	1	29	16	46	63.1	5	57	38	99	65.3
70 / 74	1	16	11	28	57.6	5	36	28	69	60.3	27	52	56	135	63.5
65 / 69	6	22	18	46	54.7	18	42	40	101	57.8	62	35	54	151	61.1
60 / 64	16	30	29	74	52.4	44	41	49	135	55.1	57	19	36	111	57.0
55 / 59	23	32	32	88	48.6	53	32	42	127	51.2	46	8	18	72	53.0
50 / 54	29	32	36	97	45.1	47	23	31	101	47.2	27	3	8	38	48.8
45 / 49	39	31	34	104	41.2	41	13	19	73	43.0	12	1	2	15	44.7
40 / 44	39	29	31	99	37.4	25	4	10	38	38.5	3		0	3	40.4
35 / 39	38	17	22	78	33.3	12	0	2	15	34.0	0		0	0	37.0
30 / 34	32	8	13	53	29.3	3	0		3	30.5					
25 / 29	13	2	4	18	24.6	0			0	26.5					
20 / 24	4	1	1	5	19.9										
15 / 19	1		0	1	15.6										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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.

PITTSBURGH INTL PA

WMO No. 725200

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	77.0										
95 / 99		2	1	2	74.4		1	0	1	73.9					
90 / 94	0	11	3	14	73.7		8	2	10	74.0		1	0	1	72.7
85 / 89	1	32	13	46	71.9	0	24	8	32	71.8	0	7	2	9	71.1
80 / 84	2	64	37	103	69.3	1	56	27	85	69.2	0	22	6	28	68.3
75 / 79	13	65	57	135	67.4	9	61	46	115	67.4	1	39	20	60	66.2
70 / 74	60	48	69	177	66.0	45	55	72	172	65.8	16	51	40	107	64.1
65 / 69	81	19	45	146	62.9	84	30	57	172	62.9	41	44	53	138	61.3
60 / 64	58	6	19	83	58.7	63	10	27	99	58.7	48	37	48	133	57.1
55 / 59	24	1	4	28	54.0	30	2	8	40	53.9	50	26	37	113	52.8
50 / 54	8	0	0	8	49.5	13	0	2	15	49.3	41	11	22	74	48.8
45 / 49	1		0	2	45.3	3	0	0	3	44.9	26	2	9	37	44.2
40 / 44	0			0	43.0	1	0		1	40.1	13	0	3	16	40.0
35 / 39											4		0	4	36.1
30 / 34											0			0	32.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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.

PITTSBURGH INTL PA

WMO No. 725200

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															
85 / 89															
80 / 84		1		1	64.5										
75 / 79	0	10	2	11	63.0		0		0	62.2					
70 / 74	1	23	8	31	60.3	0	6	1	7	59.4		0	0	0	60.5
65 / 69	6	30	19	55	57.8	1	11	5	17	56.7		1	0	1	58.4
60 / 64	17	40	34	91	54.7	8	17	14	39	54.6	2	4	2	8	55.5
55 / 59	30	41	40	111	50.9	16	22	21	59	50.9	7	9	8	23	51.8
50 / 54	40	41	47	127	46.9	22	27	26	75	46.3	8	11	11	30	47.2
45 / 49	48	35	47	130	42.7	26	34	32	93	42.1	10	18	13	41	42.1
40 / 44	48	20	32	101	38.7	33	37	36	106	37.7	16	29	24	69	37.9
35 / 39	34	6	16	56	34.6	43	39	42	123	33.4	31	45	43	120	33.5
30 / 34	19	1	4	24	30.6	45	31	40	117	29.3	61	50	58	169	29.1
25 / 29	4	0	1	5	25.6	33	11	18	61	24.9	43	32	36	110	24.5
20 / 24	1		0	1	21.8	12	2	4	17	20.7	27	20	24	71	20.0
15 / 19						2	1	1	4	16.0	20	14	13	47	15.3
10 / 14						1	0	0	1	10.7	11	7	10	28	10.5
5 / 9						0	0	0	0	5.3	7	3	4	14	6.2
0 / 4						0		0	0	0.9	4	1	1	6	1.4
-5 / -1											1	1	1	2	-3.1
-10 / -6											1	0	0	1	-6.8
-15 / -11											1	0	0	1	-11.4
-20 / -16															
-25 / -21															

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.

PITTSBURGH INTL PA

WMO No. 725200

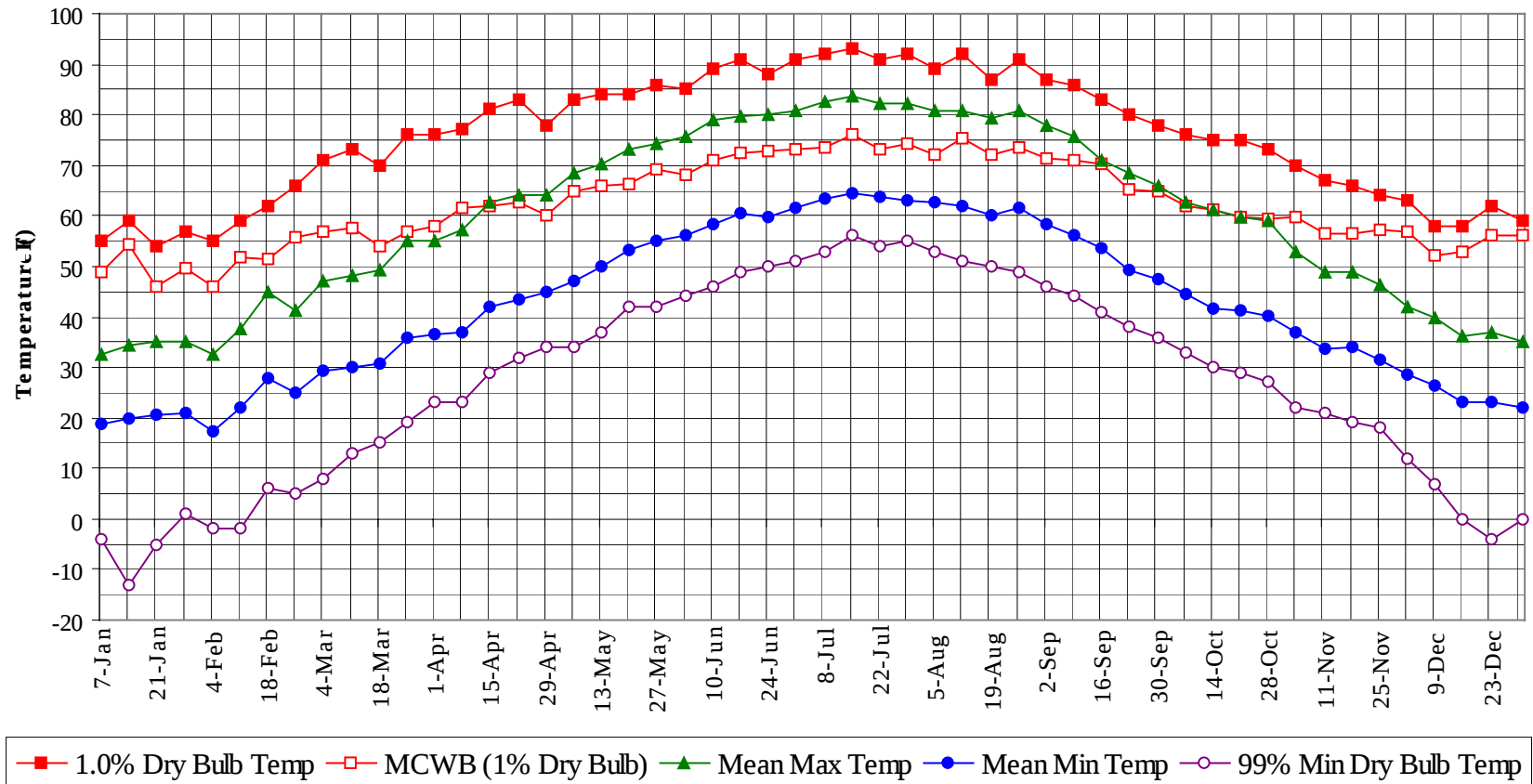
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

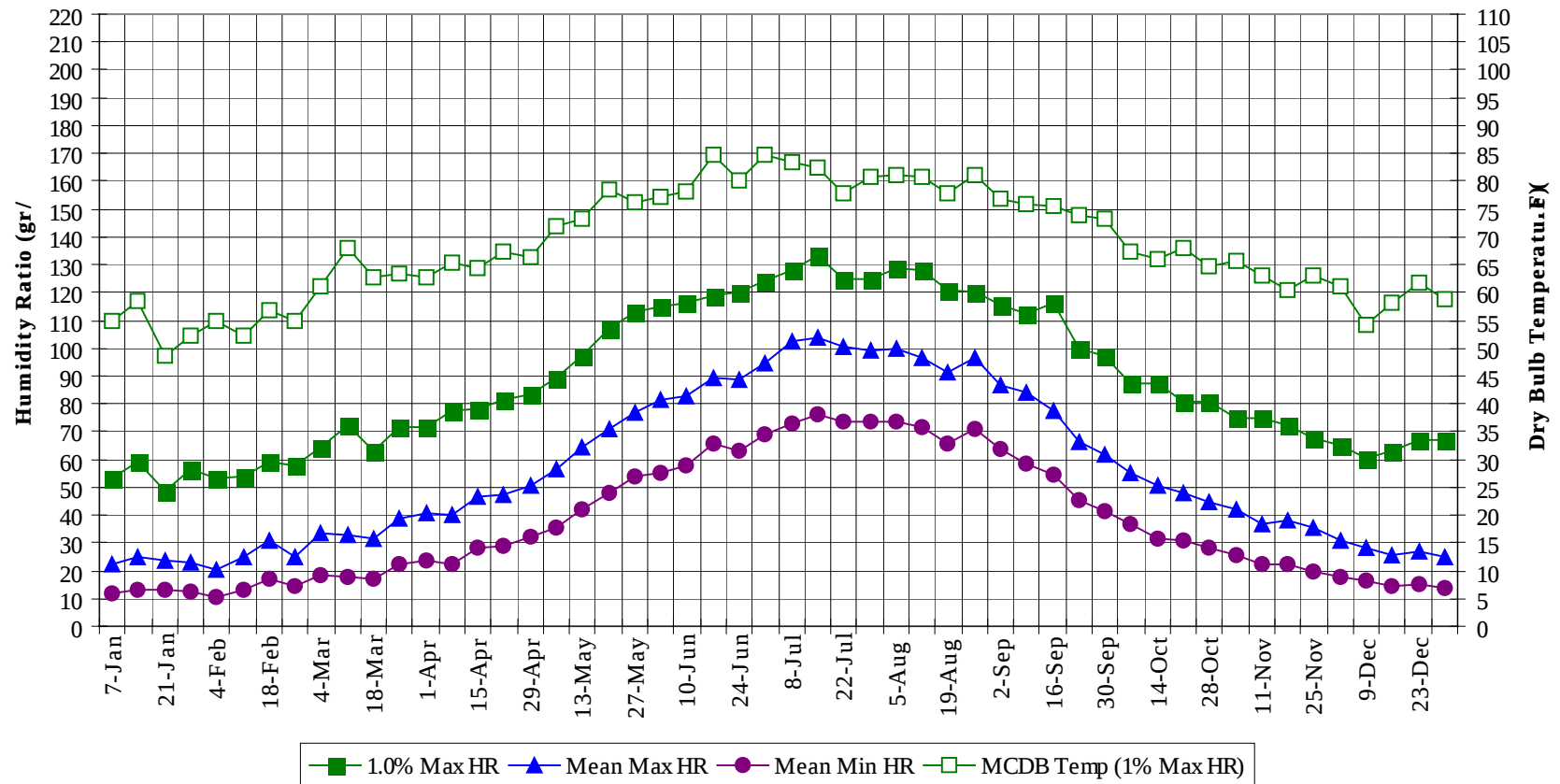
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		0		0	77.0
95 / 99		3	1	4	74.4
90 / 94	0	23	7	30	73.7
85 / 89	1	87	30	118	71.2
80 / 84	5	210	101	316	68.3
75 / 79	29	274	184	487	66.0
70 / 74	154	294	287	734	63.9
65 / 69	299	244	298	842	60.6
60 / 64	315	223	268	807	56.0
55 / 59	292	200	236	729	51.3
50 / 54	256	193	223	671	46.8
45 / 49	246	195	213	654	42.3
40 / 44	237	193	213	643	37.8
35 / 39	252	211	227	690	33.4
30 / 34	288	214	248	750	29.1
25 / 29	209	133	152	494	24.4
20 / 24	133	87	98	318	19.9
15 / 19	86	59	64	209	15.2
10 / 14	55	35	40	129	10.5
5 / 9	37	15	19	72	6.1
0 / 4	20	6	9	35	1.3
-5 / -1	9	3	3	15	-3.1
-10 / -6	4	2	2	8	-7.2
-15 / -11	2	1	1	3	-12.0
-20 / -16	1	0	0	1	-17.4
-25 / -21	0			0	-20.8

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



PITTSBURGH INTL**PA****WMO No. 725200****Long Term Dry Bulb Temperature and Humidity Summary**

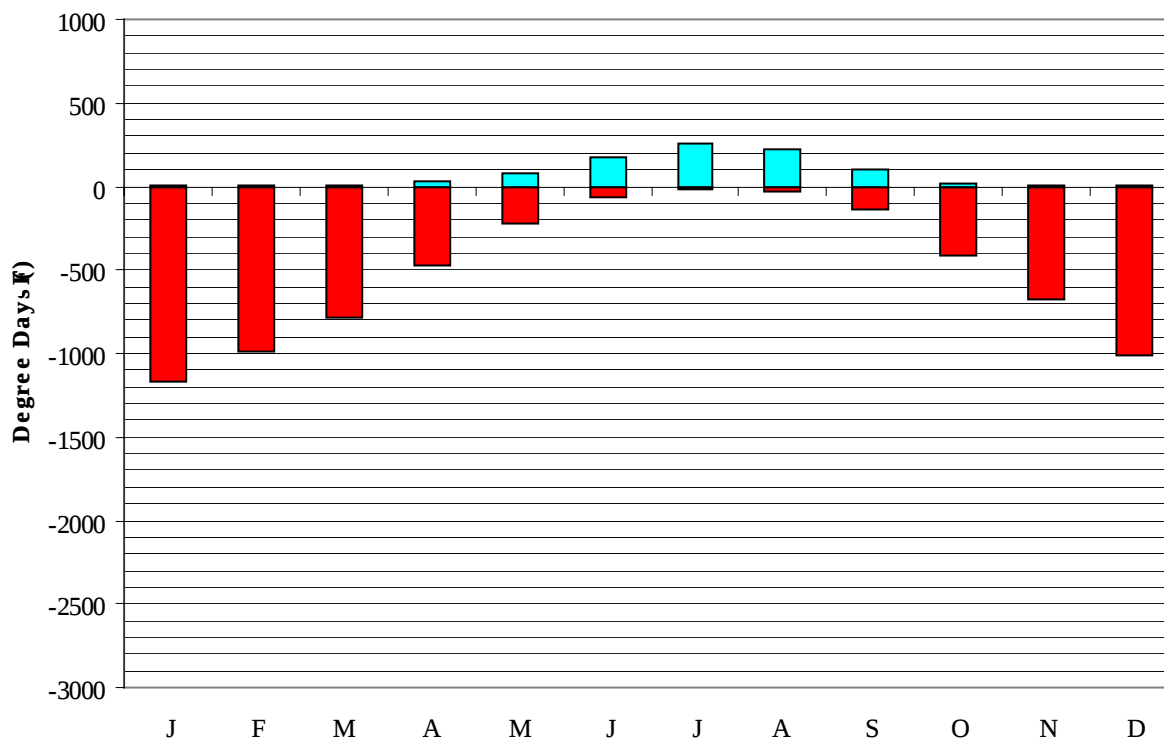
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	55.0	49.0	32.4	18.6	-4.0	53.2	54.7	22.2	12.1
14-Jan	59.0	54.1	34.5	19.7	-13.0	58.8	58.3	24.7	13.0
21-Jan	54.0	45.8	35.0	20.7	-5.0	48.3	48.5	23.6	12.9
28-Jan	57.0	49.6	35.2	20.9	1.0	56.7	52.3	23.3	12.6
4-Feb	55.0	46.0	32.5	17.5	-2.0	53.2	54.9	20.1	10.7
11-Feb	59.0	51.8	37.7	21.9	-2.0	53.9	52.3	24.6	13.3
18-Feb	62.0	51.6	44.9	27.9	6.0	58.8	56.7	30.9	17.3
25-Feb	66.0	55.7	41.1	24.8	5.0	58.1	54.8	24.9	14.1
4-Mar	71.0	56.9	46.9	29.2	8.0	64.4	61.2	33.6	18.5
11-Mar	73.0	57.6	48.2	30.0	13.0	72.1	68.1	32.6	17.7
18-Mar	70.0	54.0	49.3	30.8	15.0	63.0	62.7	31.4	17.4
25-Mar	76.0	56.8	55.1	35.7	19.0	71.4	63.5	38.9	22.5
1-Apr	76.0	58.0	55.0	36.6	23.0	71.4	62.9	40.5	23.8
8-Apr	77.0	61.6	57.3	37.0	23.0	77.7	65.4	40.0	22.5
15-Apr	81.0	61.9	62.8	42.0	29.0	78.4	64.3	46.4	28.1
22-Apr	83.0	62.7	64.1	43.3	32.0	81.2	67.3	47.4	29.0
29-Apr	78.0	60.0	64.3	44.8	34.0	83.3	66.4	50.9	31.9
6-May	83.0	64.7	68.3	47.2	34.0	89.6	71.9	56.3	35.2
13-May	84.0	66.0	70.3	50.1	37.0	97.3	73.2	64.4	42.0
20-May	84.0	66.5	73.1	53.2	42.0	107.1	78.6	71.1	48.1
27-May	86.0	69.1	74.2	54.9	42.0	112.7	76.1	76.7	54.0
3-Jun	85.0	68.2	75.8	56.0	44.0	114.8	77.3	81.5	55.3
10-Jun	89.0	71.1	79.2	58.3	46.0	116.2	78.1	82.5	58.0
17-Jun	91.0	72.5	79.9	60.5	49.0	119.0	84.6	89.2	65.4
24-Jun	88.0	72.9	80.0	59.7	50.0	120.4	80.0	88.4	62.8
1-Jul	91.0	73.0	80.9	61.7	51.0	123.9	84.8	94.7	69.2
8-Jul	92.0	73.6	82.7	63.4	53.0	128.1	83.5	102.2	72.8
15-Jul	93.0	76.2	83.7	64.5	56.0	133.0	82.3	103.7	76.0
22-Jul	91.0	73.4	82.2	63.7	54.0	124.6	77.8	100.5	73.3
29-Jul	92.0	74.3	82.1	63.1	55.0	124.6	80.9	99.4	73.8
5-Aug	89.0	72.2	80.7	62.6	53.0	128.8	81.1	99.5	73.7
12-Aug	92.0	75.2	80.8	62.1	51.0	128.1	80.9	96.3	71.6
19-Aug	87.0	72.1	79.5	60.2	50.0	121.1	77.9	91.0	66.0
26-Aug	91.0	73.5	80.7	61.4	49.0	120.4	81.0	96.2	70.6
2-Sep	87.0	71.3	77.8	58.5	46.0	115.5	76.9	86.6	63.9
9-Sep	86.0	70.9	75.6	56.2	44.0	112.0	75.9	84.0	58.4
16-Sep	83.0	70.3	71.1	53.8	41.0	116.2	75.6	77.6	54.5
23-Sep	80.0	65.3	68.3	49.2	38.0	100.1	73.8	66.4	45.3
30-Sep	78.0	64.8	66.1	47.3	36.0	97.3	73.1	61.8	41.5
7-Oct	76.0	61.9	62.6	44.5	33.0	87.5	67.2	54.9	36.8
14-Oct	75.0	61.1	61.1	41.7	30.0	87.5	65.9	50.7	31.8
21-Oct	75.0	59.7	59.6	41.2	29.0	80.5	67.8	47.7	31.2
28-Oct	73.0	59.2	59.0	40.1	27.0	80.5	64.8	44.8	28.4
4-Nov	70.0	59.8	53.0	37.0	22.0	74.9	65.7	42.0	25.8
11-Nov	67.0	56.5	48.9	33.5	21.0	74.9	62.9	36.5	22.2
18-Nov	66.0	56.6	48.8	33.8	19.0	72.1	60.3	37.9	22.6
25-Nov	64.0	57.1	46.3	31.7	18.0	67.9	63.1	35.5	20.0
2-Dec	63.0	56.8	42.1	28.5	12.0	65.1	60.9	30.5	17.6
9-Dec	58.0	52.2	39.9	26.4	7.0	60.2	54.1	28.6	16.6
16-Dec	58.0	52.8	36.3	23.1	0.0	63.0	58.3	25.3	14.4
23-Dec	62.0	56.1	36.9	23.2	-4.0	67.2	61.8	27.1	15.0
31-Dec	59.0	56.3	35.0	22.0	0.0	67.2	58.8	24.8	13.6

PITTSBURGH INTL

PA

WMO No. 725200

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



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

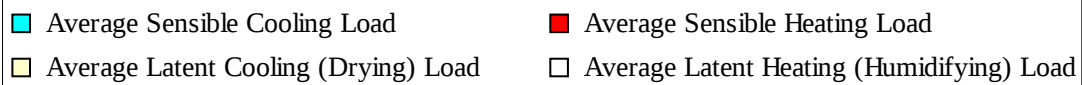
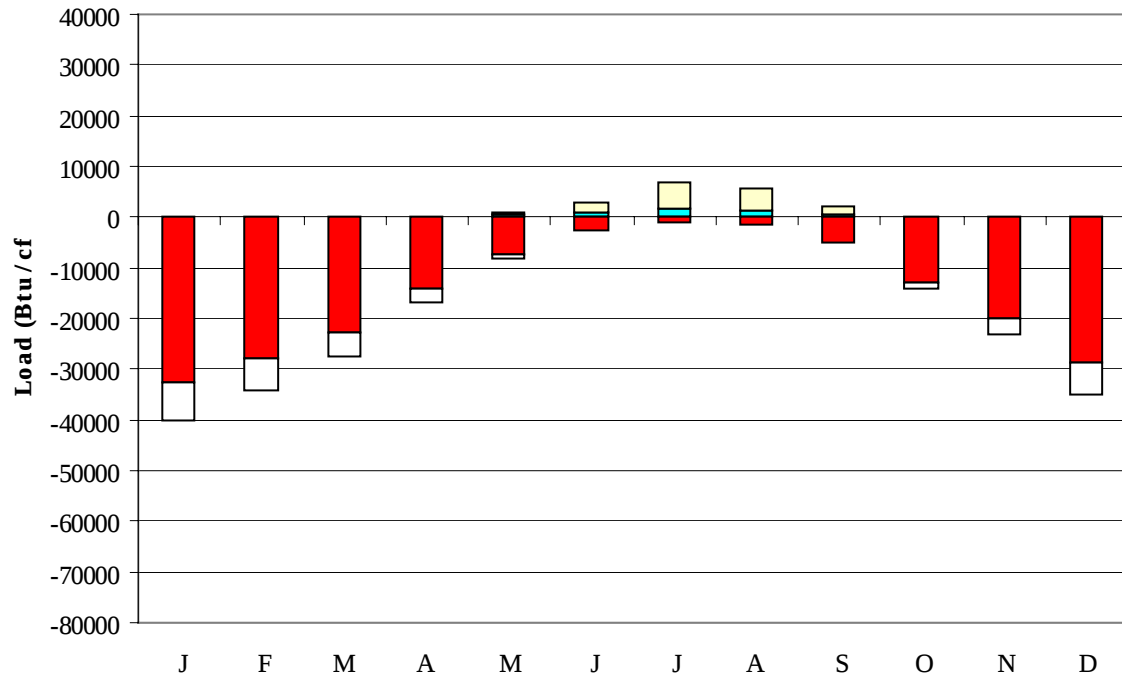
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1172
FEB	0	990
MAR	6	782
APR	26	468
MAY	76	224
JUN	174	68
JUL	263	23
AUG	222	34
SEP	98	140
OCT	18	418
NOV	3	680
DEC	0	1017
ANN	887	6016

PITTSBURGH INTL

PA

WMO No. 725200

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



	Average Sensible Cooling Load (Btu/cfm)	Average Sensible Heating Load (Btu/cfm)	Average Latent Cooling Load (Btu/cfm)	Average Latent Heating Load (Btu/cfm)
JAN	0	-32790	0	-7521
FEB	0	-27863	0	-6494
MAR	8	-22597	0	-4949
APR	96	-14197	13	-2471
MAY	375	-7543	425	-489
JUN	1045	-2721	2045	-12
JUL	1893	-1149	4967	0
AUG	1428	-1588	4276	-2
SEP	426	-5046	1667	-43
OCT	22	-13022	90	-980
NOV	0	-19907	2	-3249
DEC	0	-28763	0	-6119
ANN	5293	-177186	13485	-32329

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

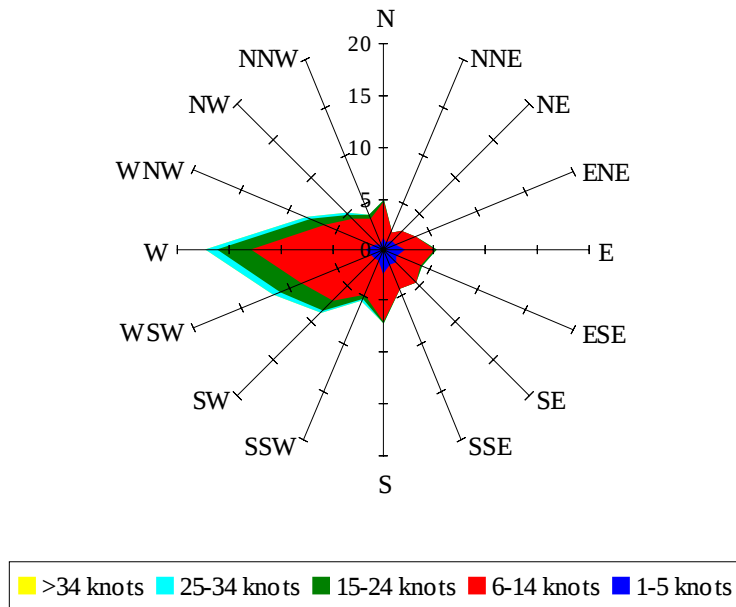
Average Annual Solar Heat and Illumination – Nearest Available Site

(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

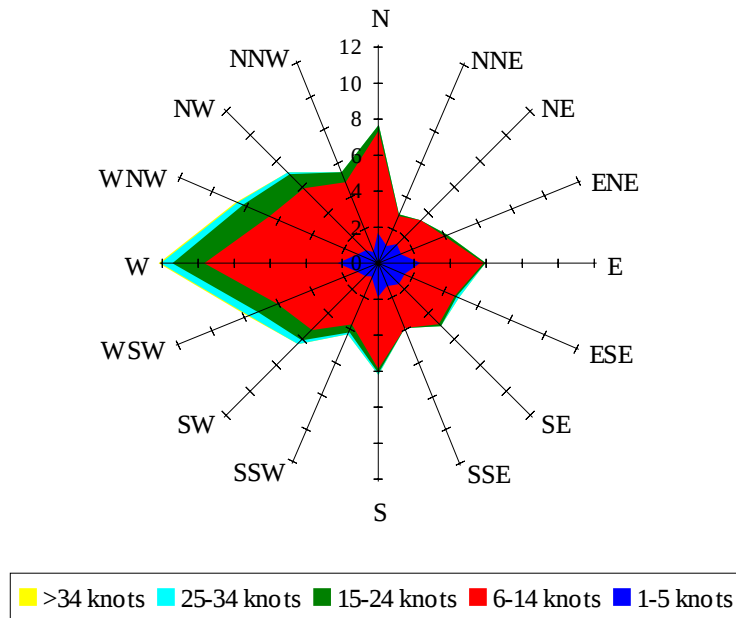
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	32	67	80	67	31	40	79	99	96	72
	M.Cloudy	18	40	48	40	19	25	53	70	71	51
NORTH	M.Clear	9	14	15	14	9	19	16	17	18	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 = 4.36

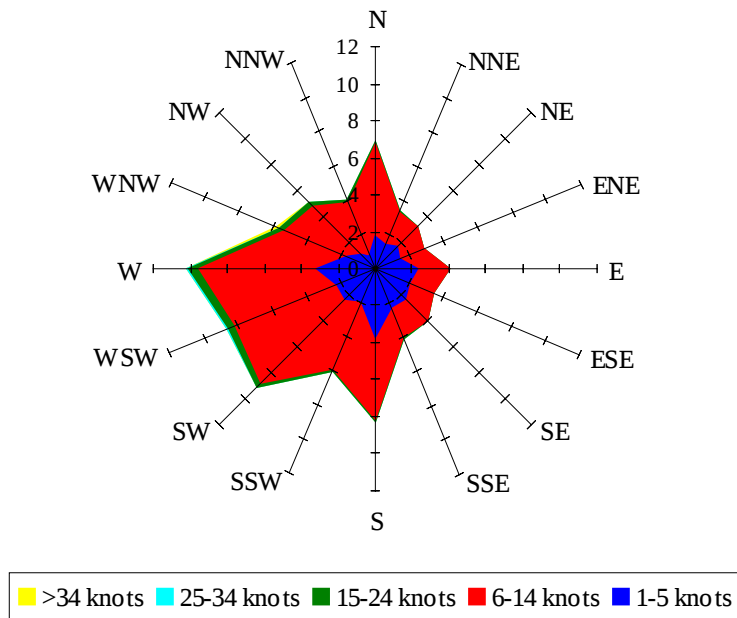
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 6.13

Wind Summary - June, July, and August

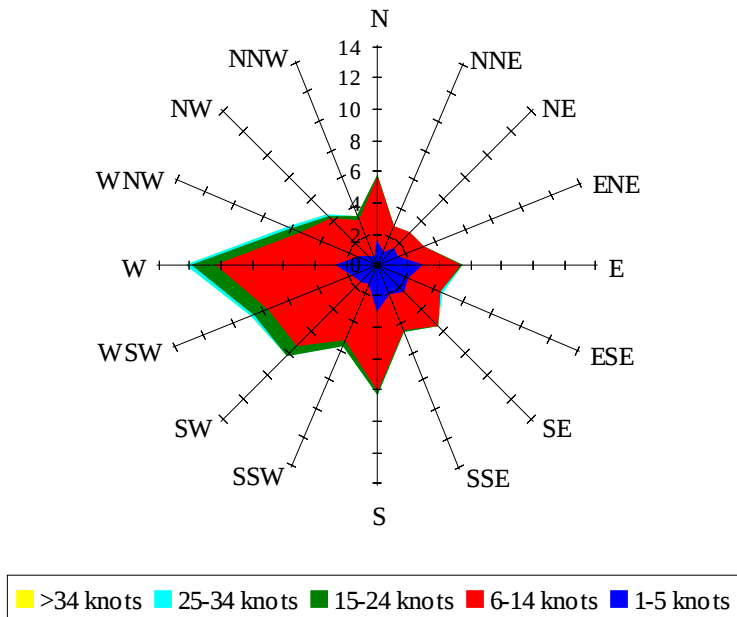
Labels of Percent Frequency on North Axis



Percent Calm = 11.67

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 9.59