

BANGOR INTL ARPT ME

Latitude = 44.80 N

WMO No. 726088

Longitude = 68.83 W

Elevation = 194 feet

Period of Record = 1967 to 1996

Average Pressure = 29.74 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	93	75	101	9.5	W
0.4% Occurrence	87	71	90	9.7	W
1.0% Occurrence	84	69	85	8.8	S
2.0% Occurrence	81	67	80	9.0	S
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	3	2	4	6.8	WNW
99.0% Occurrence	-3	-4	3	6.8	WNW
99.6% Occurrence	-8	-9	2	5.9	WNW
Median of Extreme Lows	-17	-17	1	2.7	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	77	88	123	9.6	S
0.4% Occurrence	74	84	111	8.0	S
1.0% Occurrence	72	81	104	8.1	S
2.0% Occurrence	70	78	98	7.7	S
	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	133	86	0.88	8.1	S
0.4% Occurrence	116	80	0.77	6.2	S
1.0% Occurrence	108	77	0.72	6.5	S
2.0% Occurrence	99	73	0.67	6.1	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		4	224	60	421

Other Site Data

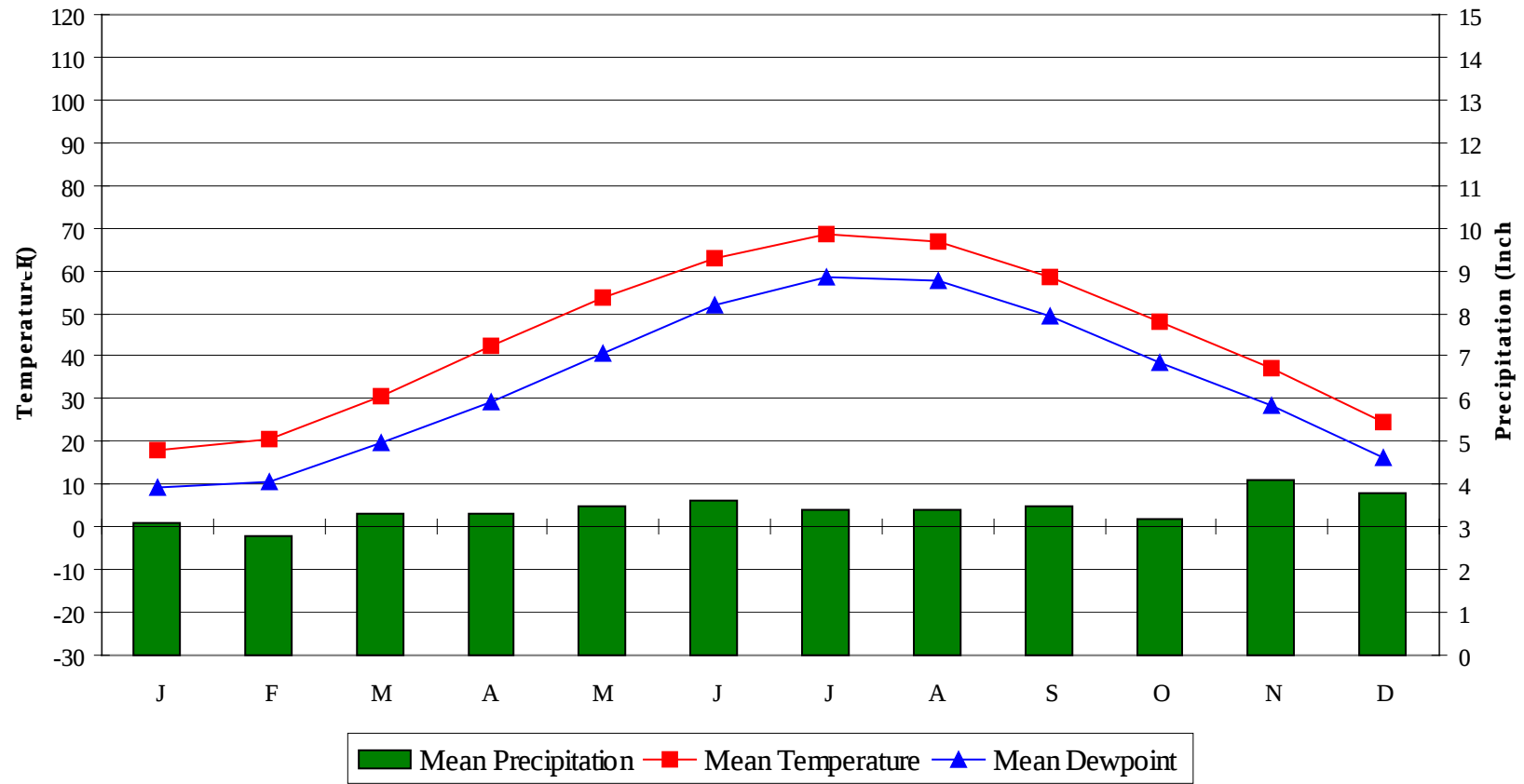
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
5	2.3	100	0.5 + 0.2
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
46.9	98	80	70

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

BANGOR INTL ARPT ME

WMO No. 726088

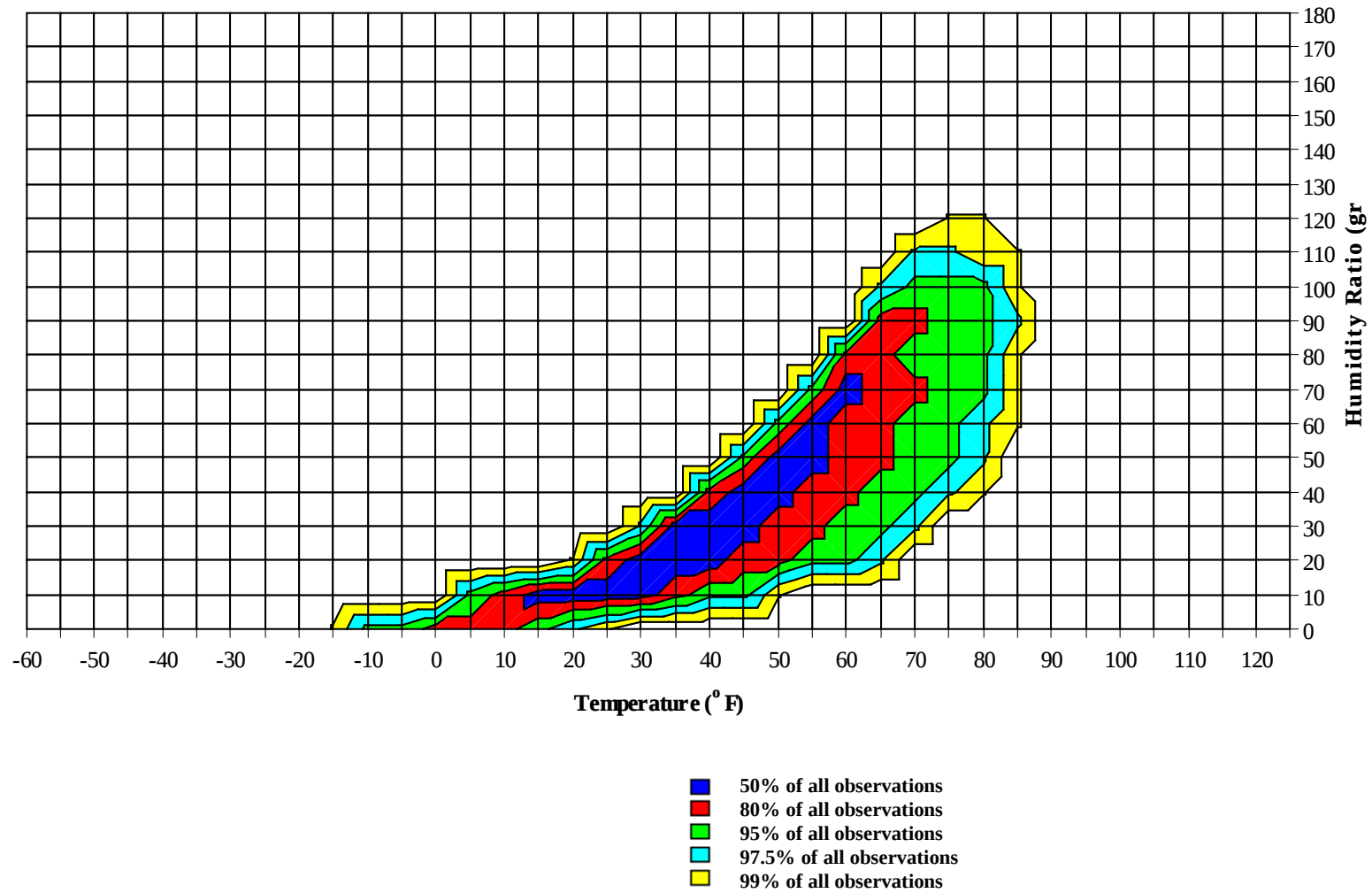
Average Annual Climate



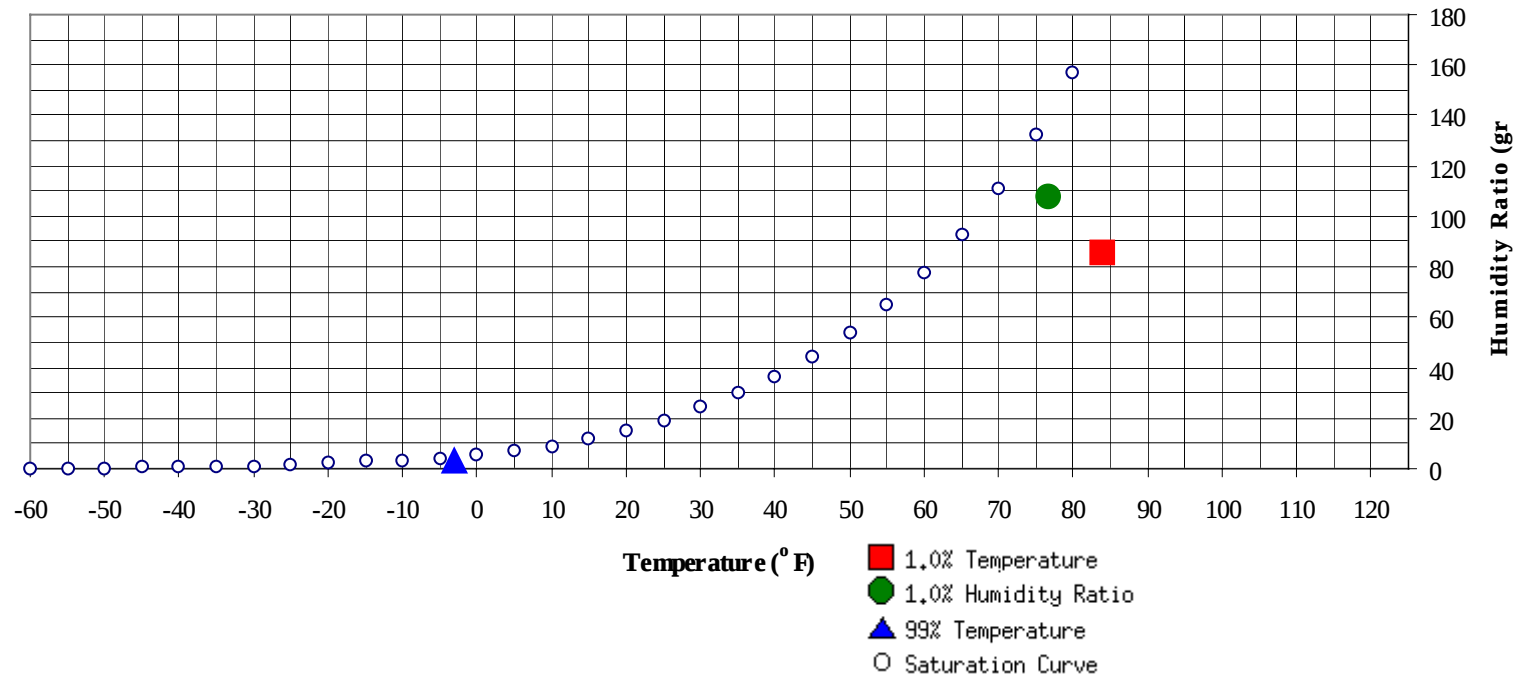
BANGOR INTL ARPT ME

WMO No. 726088

Long Term Psychrometric Summary



Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
99% Dry Bulb	-3	2.8	-0.3		107.8	76.8	71.4	69.1	35.3

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	84	85.4	69.4	33.6

BANGOR INTL ARPT ME

WMO No. 726088

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

Period of Record = 1967 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															
75 / 79															
70 / 74												0		0	53.0
65 / 69											0	1	0	1	53.0
60 / 64											0	2	0	2	50.2
55 / 59		0	0	0	51.7	0	1		1	47.4	0	3	1	4	47.1
50 / 54	1	1	1	4	50.2	0	2	0	2	46.4	0	11	4	15	44.1
45 / 49	2	3	3	8	45.3	1	5	3	9	43.4	4	23	9	37	41.2
40 / 44	4	10	6	21	39.4	6	14	8	28	38.3	12	42	25	80	37.2
35 / 39	14	21	18	53	34.7	14	25	19	58	33.6	33	56	55	144	33.3
30 / 34	23	32	26	81	29.8	21	34	30	85	29.0	57	47	59	163	29.0
25 / 29	25	36	29	90	24.6	21	36	35	92	24.2	44	28	40	112	23.9
20 / 24	23	36	30	89	19.6	25	36	32	93	19.5	33	18	25	76	19.2
15 / 19	26	34	34	94	15.0	29	29	32	90	14.9	23	11	15	49	14.9
10 / 14	30	28	34	92	10.4	33	20	25	78	10.3	18	5	9	32	10.1
5 / 9	34	24	28	87	5.6	28	12	21	62	5.6	11	2	4	16	5.5
0 / 4	26	13	20	60	1.0	19	6	11	35	0.9	7	0	1	8	1.1
-5 / -1	17	4	9	30	-3.1	13	3	5	21	-3.5	3	0	0	3	-3.1
-10 / -6	12	3	5	20	-7.5	9	1	1	11	-7.2	1	0		1	-6.8
-15 / -11	8	1	2	11	-12.2	3	0	1	4	-11.8	0			0	-10.6
-20 / -16	2	0	0	3	-16.6	1		0	1	-16.6					
-25 / -21	1		0	1	-21.2	0			0	-21.8					
-30 / -26						0			0	-26.5					

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 = 1967 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	65.0		0	0	0	75.0
90 / 94		0	0	0	69.0		1	0	1	66.7		3	0	3	72.8
85 / 89		0	0	0	66.3		2	0	3	67.4		9	2	10	69.5
80 / 84		0	0	0	65.8	0	4	1	6	63.5	1	23	4	28	66.6
75 / 79		1	0	2	58.5	0	11	2	13	60.5	2	37	11	50	63.6
70 / 74		4	1	4	56.2	1	20	6	27	58.2	7	50	26	83	61.5
65 / 69	0	7	2	9	53.1	3	39	14	56	54.6	20	45	39	104	59.6
60 / 64	0	17	5	22	49.2	9	52	27	88	52.4	50	40	64	154	57.3
55 / 59	2	28	12	41	46.7	27	47	46	121	50.4	76	21	57	154	53.9
50 / 54	10	42	23	76	44.4	54	40	60	154	47.3	57	10	29	96	49.6
45 / 49	24	50	42	116	41.4	68	23	57	148	43.6	22	1	7	30	44.9
40 / 44	47	45	55	148	37.7	55	7	27	89	39.3	6		1	6	40.4
35 / 39	63	27	56	146	33.6	23	1	6	31	34.3	1			1	36.8
30 / 34	57	14	32	103	29.3	8		1	9	29.7					
25 / 29	26	3	9	38	24.3	1			1	25.3					
20 / 24	7	1	1	9	19.5										
15 / 19	2	0	1	3	14.7										
10 / 14	1	0		1	10.6										
5 / 9	0			0	7.0										
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															

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

Period of Record = 1967 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	78.3					
95 / 99		0		0	74.9	1	0	1	74.7						
90 / 94		4	1	5	74.8	3	0	4	73.9			0		0	73.6
85 / 89	0	21	3	24	71.1	0	16	2	18	71.4		2	0	2	71.7
80 / 84	1	50	12	63	68.1	0	39	7	46	69.0		8	1	9	68.3
75 / 79	5	59	25	89	66.1	3	54	18	75	66.2	0	18	3	20	65.1
70 / 74	21	55	49	125	64.6	16	64	45	125	64.2	3	33	10	46	62.4
65 / 69	59	37	73	169	62.7	55	44	70	169	62.6	11	56	24	91	59.7
60 / 64	91	18	60	168	59.3	82	21	63	166	58.9	37	63	56	156	56.9
55 / 59	50	3	22	75	54.7	52	5	29	86	54.4	56	40	65	161	53.2
50 / 54	18	0	4	22	50.0	28	1	10	39	49.8	56	18	44	118	49.0
45 / 49	3		0	4	45.3	11		2	13	45.3	37	3	24	65	44.4
40 / 44	0			0	41.3	2		0	2	41.4	26	0	10	36	39.9
35 / 39											11		3	13	35.4
30 / 34											3		0	3	31.3
25 / 29											0			0	25.4
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															

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

Period of Record = 1967 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	67.2										
75 / 79		2	0	2	63.3										
70 / 74		6	0	7	61.0		0		0	61.3					
65 / 69	1	16	3	20	58.1	0	1	0	2	57.0		0		0	57.0
60 / 64	8	33	14	54	55.7	1	5	1	7	56.5		0		0	53.5
55 / 59	21	51	31	103	52.0	5	12	7	23	52.9	1	1	1	3	54.5
50 / 54	38	57	50	145	47.4	13	26	18	56	48.2	2	4	2	8	49.2
45 / 49	41	46	53	140	42.7	21	38	27	86	43.3	3	9	6	19	43.8
40 / 44	49	26	47	121	38.3	28	47	35	110	38.1	9	20	12	41	38.9
35 / 39	46	9	32	87	34.0	42	49	44	136	33.4	22	35	26	83	34.2
30 / 34	30	1	15	46	29.7	52	36	55	143	29.0	38	43	42	123	29.5
25 / 29	13	1	3	17	25.5	40	15	32	87	24.4	39	42	42	123	24.5
20 / 24	2		0	2	21.2	22	6	12	41	20.1	32	34	36	102	19.9
15 / 19						9	2	7	18	15.7	29	24	27	80	15.3
10 / 14						5	0	2	8	11.3	24	17	24	65	10.7
5 / 9						2	0	0	3	6.9	20	9	14	44	5.8
0 / 4						0			0	2.9	14	5	10	29	1.1
-5 / -1											8	2	4	14	-3.0
-10 / -6											4	1	2	6	-7.6
-15 / -11											2	0	0	3	-12.1
-20 / -16											1	0	0	1	-16.8
-25 / -21											0			0	-21.3
-30 / -26															

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BANGOR INTL ARPT ME

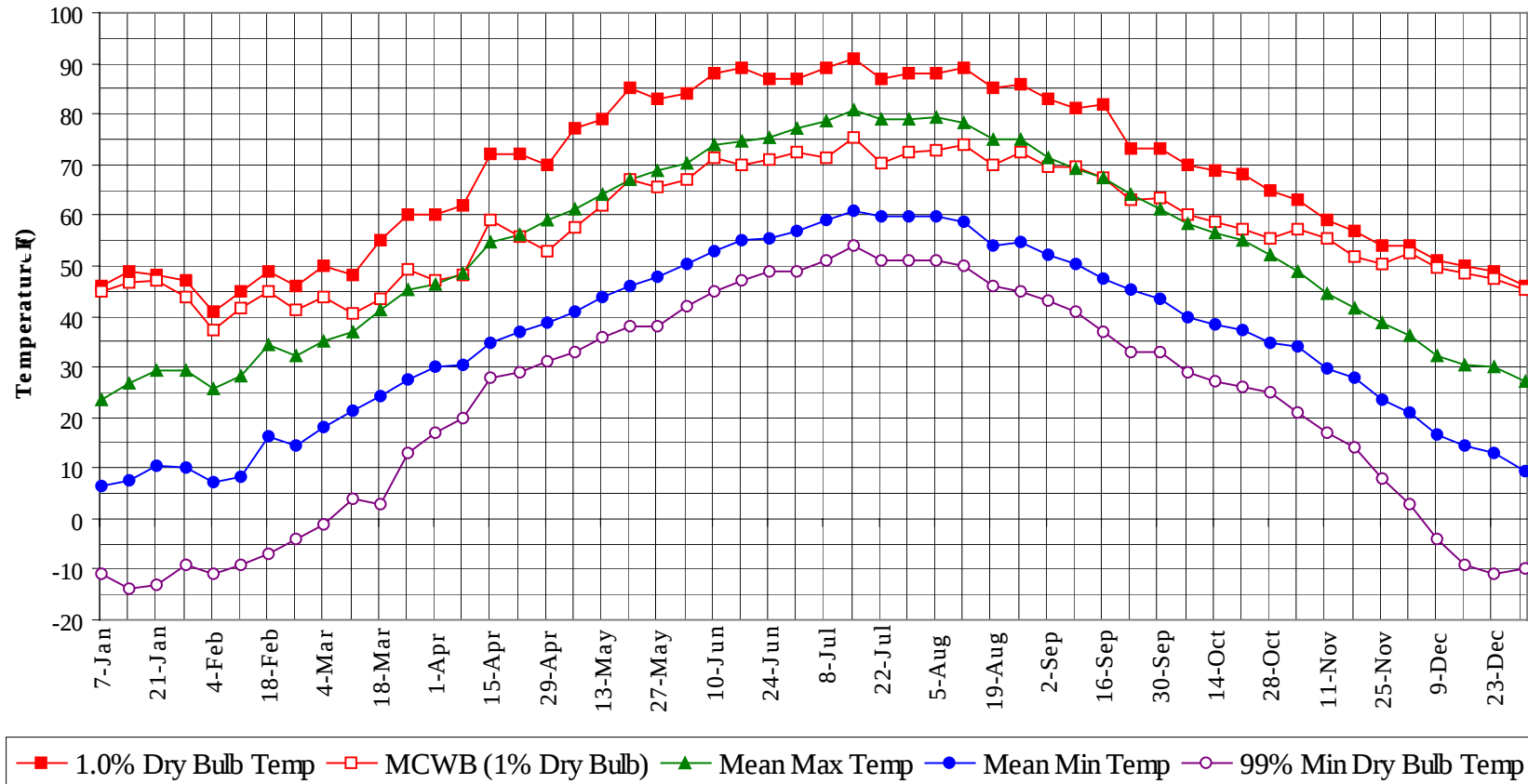
WMO No. 726088

Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**Period of Record = 1967 to 1996**

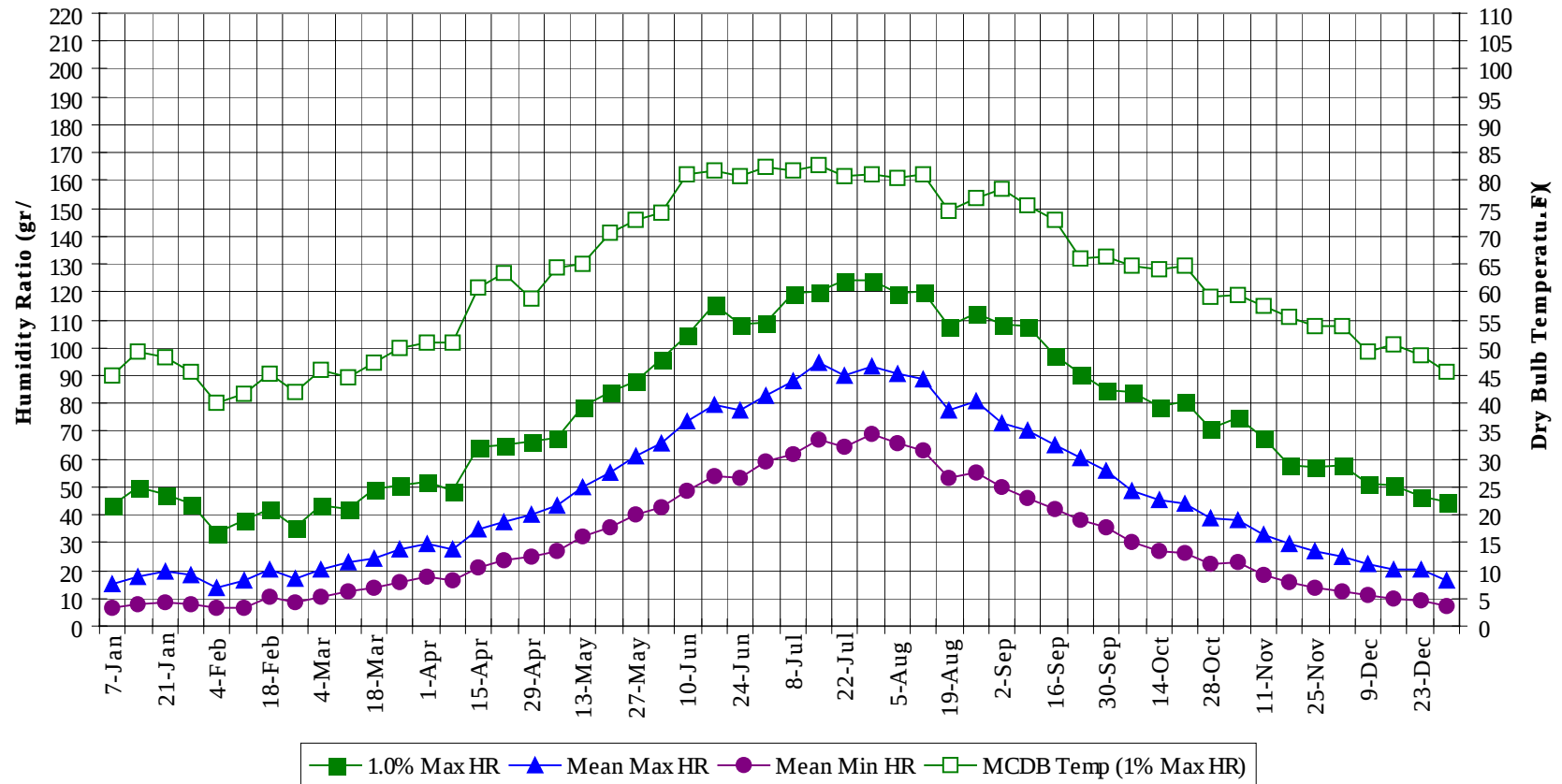
Annual Totals						
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	
	01 To 08	09 To 16	17 To 00			
100 / 104	0			0	78.3	
95 / 99	1			0	1	74.5
90 / 94	12			1	13	73.5
85 / 89	0	50	7	57	70.7	
80 / 84	2	125	25	152	68.0	
75 / 79	10	182	59	251	65.2	
70 / 74	47	232	138	417	63.1	
65 / 69	150	246	225	621	60.7	
60 / 64	277	252	290	819	57.1	
55 / 59	290	213	270	773	52.6	
50 / 54	278	212	247	737	47.9	
45 / 49	238	203	234	674	43.1	
40 / 44	245	212	225	682	38.3	
35 / 39	269	223	257	750	33.8	
30 / 34	290	206	260	755	29.3	
25 / 29	208	160	191	559	24.3	
20 / 24	144	131	136	411	19.6	
15 / 19	118	101	115	334	15.1	
10 / 14	111	71	95	276	10.4	
5 / 9	95	48	69	212	5.7	
0 / 4	66	24	42	133	1.0	
-5 / -1	40	9	18	68	-3.2	
-10 / -6	26	5	8	39	-7.4	
-15 / -11	13	2	3	18	-12.1	
-20 / -16	4	0	1	5	-16.6	
-25 / -21	1		0	1	-21.3	
-30 / -26	0			0	-26.5	

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



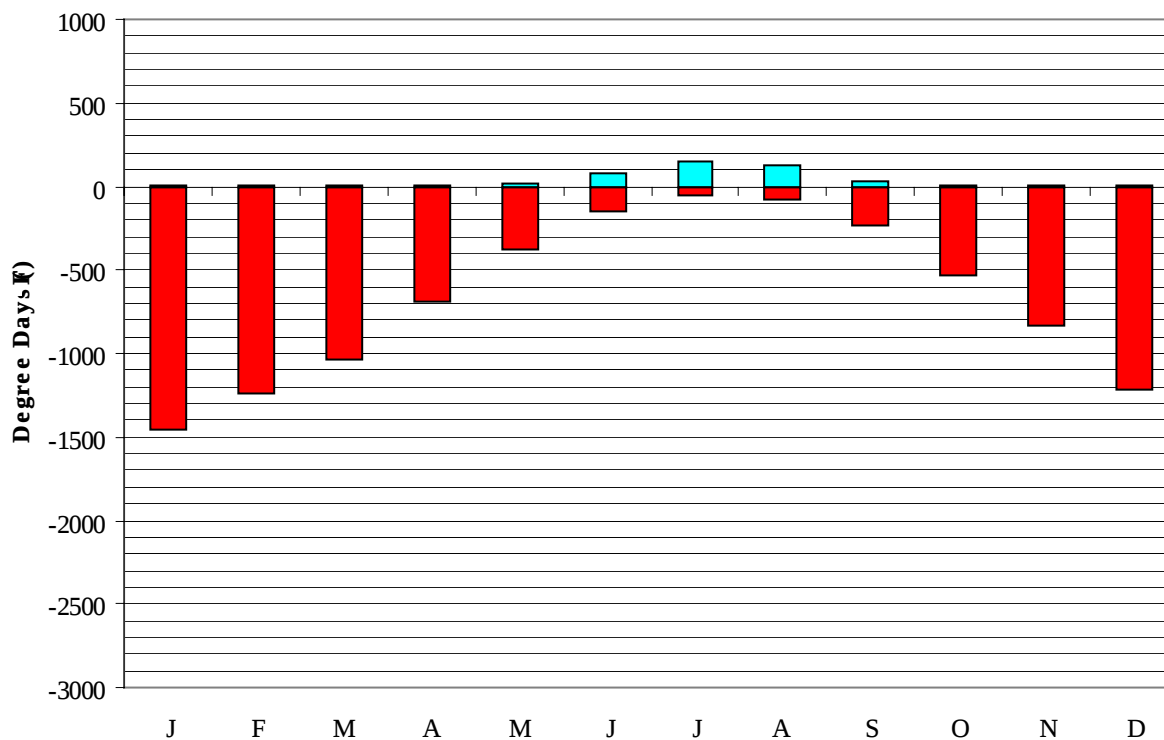
BANGOR INTL ARPT ME**WMO No. 726088****Long Term Dry Bulb Temperature and Humidity Summary**

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	46.0	44.8	23.7	6.6	-11.0	43.4	45.0	15.2	6.7
14-Jan	49.0	46.5	26.6	7.6	-14.0	49.7	49.3	17.7	7.9
21-Jan	48.0	47.0	29.3	10.3	-13.0	47.6	48.4	19.4	8.4
28-Jan	47.0	43.8	29.2	10.3	-9.0	44.1	45.6	18.4	8.0
4-Feb	41.0	37.5	25.6	7.0	-11.0	33.6	40.1	13.9	6.4
11-Feb	45.0	41.6	28.3	8.4	-9.0	37.8	41.6	16.2	6.9
18-Feb	49.0	45.0	34.3	16.4	-7.0	42.0	45.2	20.6	10.6
25-Feb	46.0	41.3	32.0	14.4	-4.0	35.7	42.2	17.1	8.7
4-Mar	50.0	43.9	35.1	18.1	-1.0	43.4	45.9	20.3	10.7
11-Mar	48.0	40.6	37.0	21.4	4.0	42.0	44.8	22.8	12.2
18-Mar	55.0	43.3	41.2	24.3	3.0	49.0	47.3	24.6	13.7
25-Mar	60.0	49.1	45.4	27.6	13.0	50.4	50.1	27.6	16.0
1-Apr	60.0	47.2	46.5	30.2	17.0	51.8	50.9	29.6	17.5
8-Apr	62.0	48.0	48.4	30.4	20.0	48.3	50.8	27.8	16.6
15-Apr	72.0	58.9	54.6	34.6	28.0	64.4	60.6	34.6	20.8
22-Apr	72.0	55.6	56.0	36.8	29.0	65.1	63.3	37.6	23.7
29-Apr	70.0	52.8	59.1	38.8	31.0	66.5	58.6	39.8	25.2
6-May	77.0	57.6	61.3	40.8	33.0	67.9	64.4	43.3	26.8
13-May	79.0	62.0	64.3	43.8	36.0	79.1	64.9	49.8	32.3
20-May	85.0	67.1	67.0	46.1	38.0	84.0	70.5	55.4	35.3
27-May	83.0	65.4	69.0	48.0	38.0	88.2	73.0	61.1	40.0
3-Jun	84.0	67.2	70.3	50.2	42.0	95.9	74.2	65.9	42.9
10-Jun	88.0	71.5	74.0	52.8	45.0	104.3	81.1	73.6	48.9
17-Jun	89.0	70.0	74.7	55.0	47.0	115.5	81.7	79.7	53.9
24-Jun	87.0	70.9	75.3	55.3	49.0	108.5	80.9	77.7	53.3
1-Jul	87.0	72.4	77.0	56.8	49.0	109.2	82.6	83.0	59.1
8-Jul	89.0	71.5	78.7	58.9	51.0	119.7	81.7	87.9	61.5
15-Jul	91.0	75.5	80.8	60.8	54.0	120.4	82.7	94.5	67.0
22-Jul	87.0	70.3	78.8	59.6	51.0	123.9	80.8	90.0	64.6
29-Jul	88.0	72.6	79.0	59.9	51.0	123.9	81.1	93.2	68.8
5-Aug	88.0	72.6	79.2	59.6	51.0	119.7	80.4	90.6	66.0
12-Aug	89.0	73.9	78.3	58.8	50.0	120.4	81.1	88.5	63.0
19-Aug	85.0	70.1	74.9	54.1	46.0	107.8	74.5	77.3	53.0
26-Aug	86.0	72.6	74.9	54.9	45.0	112.0	76.9	80.5	55.1
2-Sep	83.0	69.5	71.3	52.3	43.0	108.5	78.5	72.9	49.8
9-Sep	81.0	69.4	69.3	50.3	41.0	107.8	75.6	70.6	45.8
16-Sep	82.0	67.5	67.5	47.5	37.0	97.3	72.8	65.1	42.2
23-Sep	73.0	63.2	64.2	45.2	33.0	90.3	66.1	60.2	37.8
30-Sep	73.0	63.2	61.1	43.4	33.0	84.7	66.4	55.8	35.4
7-Oct	70.0	60.2	58.2	39.8	29.0	84.0	64.6	48.8	30.2
14-Oct	69.0	58.8	56.5	38.3	27.0	79.1	64.0	45.4	26.8
21-Oct	68.0	57.3	55.2	37.4	26.0	80.5	64.8	43.9	26.4
28-Oct	65.0	55.4	52.1	34.7	25.0	70.7	59.0	38.6	22.6
4-Nov	63.0	57.1	49.0	33.9	21.0	74.9	59.5	38.3	22.9
11-Nov	59.0	55.4	44.7	29.5	17.0	67.9	57.4	33.1	18.2
18-Nov	57.0	51.6	41.8	27.8	14.0	58.1	55.4	29.5	16.1
25-Nov	54.0	50.4	38.6	23.6	8.0	57.4	53.8	27.1	14.0
2-Dec	54.0	52.5	36.1	20.9	3.0	58.1	53.9	24.9	12.4
9-Dec	51.0	49.5	32.3	16.4	-4.0	51.1	49.1	22.2	11.0
16-Dec	50.0	48.4	30.5	14.5	-9.0	50.4	50.7	20.6	10.0
23-Dec	49.0	47.4	30.2	12.9	-11.0	46.9	48.7	20.6	9.5
31-Dec	46.0	45.2	27.1	9.5	-10.0	44.8	45.6	16.4	7.2

BANGOR INTL ARPT ME

WMO No. 726088

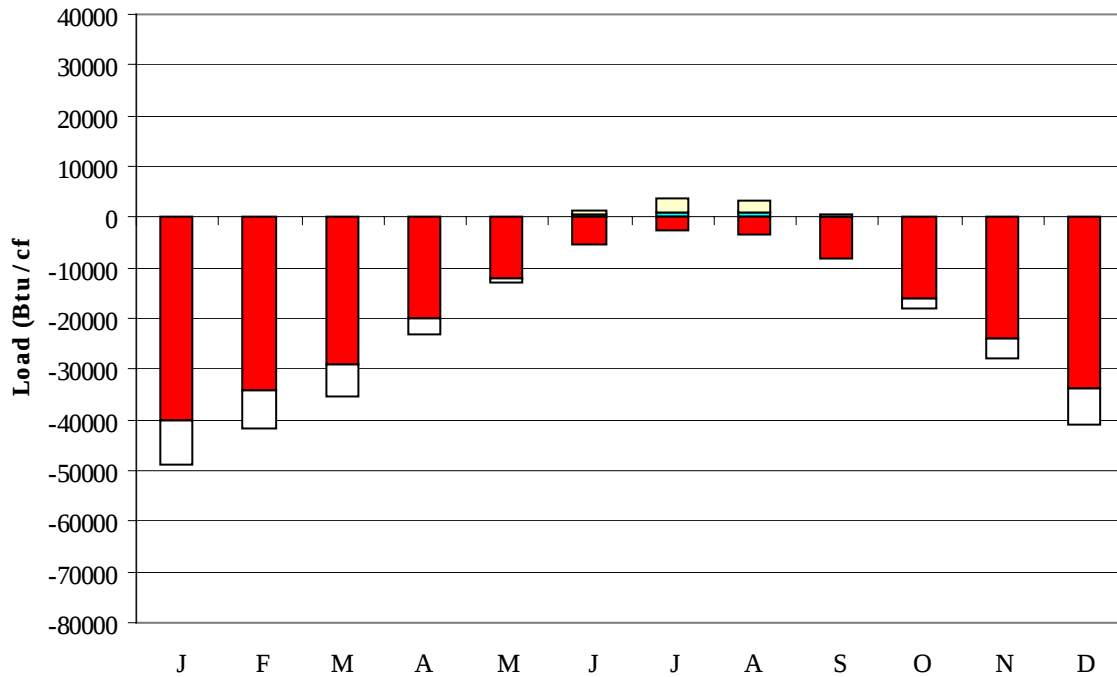
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1456
FEB	0	1238
MAR	0	1036
APR	3	684
MAY	23	378
JUN	83	149
JUL	153	57
AUG	129	78
SEP	34	238
OCT	4	536
NOV	0	835
DEC	0	1217
ANN	430	7902

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

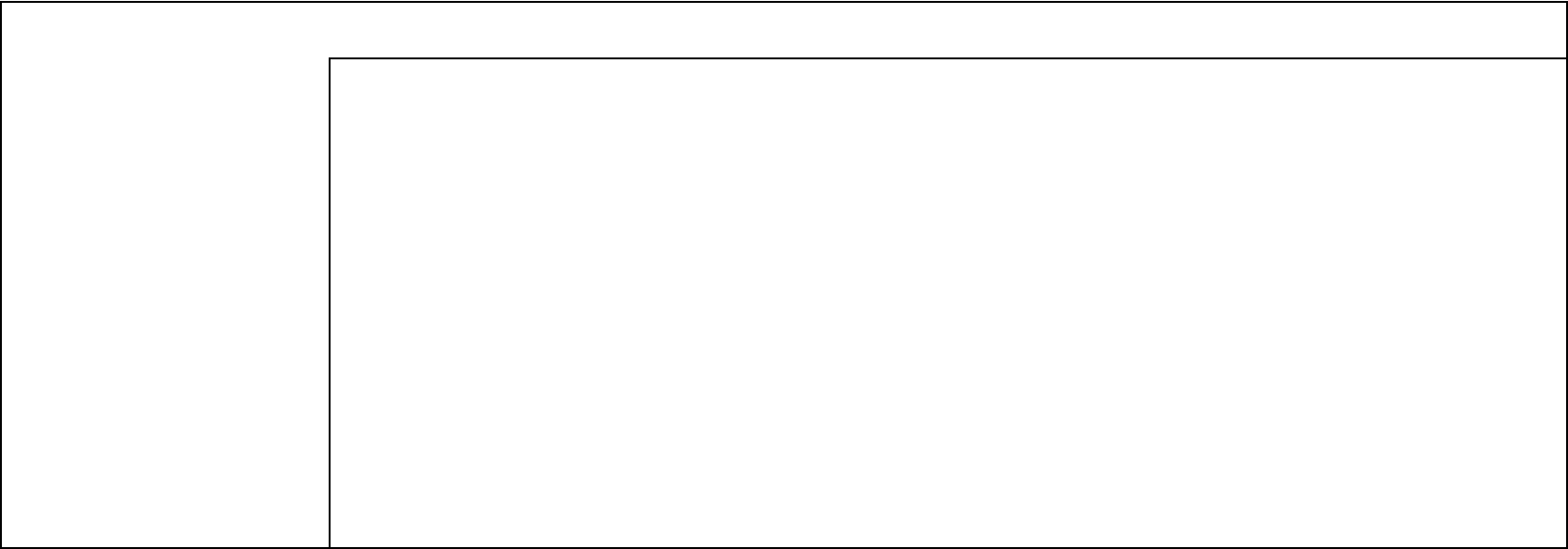


■ Average Sensible Cooling Load	■ Average Sensible Heating Load
■ Average Latent Cooling (Drying) Load	■ Average Latent Heating (Humidifying) Load

	Average Sensible Cooling Load (Btu/cfm)	Average Sensible Heating Load (Btu/cfm)	Average Latent Cooling Load (Btu/cfm)	Average Latent Heating Load (Btu/cfm)
JAN	0	-40147	0	-8684
FEB	0	-34256	0	-7627
MAR	0	-29200	0	-6035
APR	8	-20017	0	-3241
MAY	109	-11961	39	-906
JUN	482	-5431	732	-38
JUL	1019	-2580	2614	-1
AUG	775	-3255	2394	-7
SEP	125	-8092	463	-169
OCT	9	-16239	29	-1611
NOV	0	-23973	0	-3989
DEC	0	-33876	0	-6861
ANN	2527	-229027	6271	-39169

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

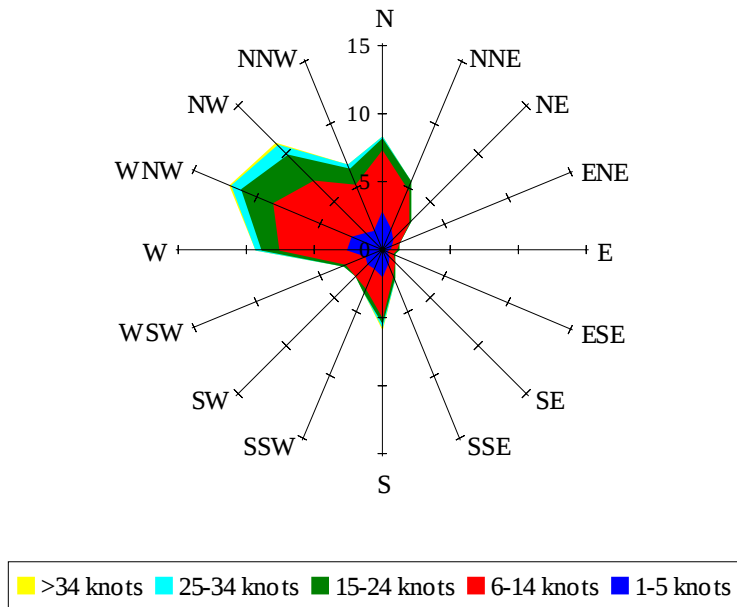
No Solar Radiation
Data Available



Average Annual Solar Heat and Illumination – Nearest Available Site

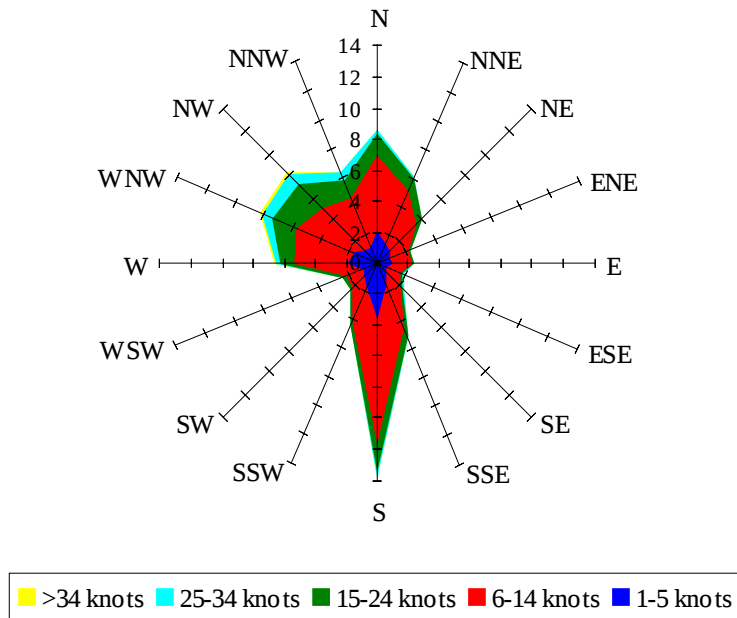
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

Wind Summary - December, January, and February **Labels of Percent Frequency on North Axis**



Percent Calm = 22.83

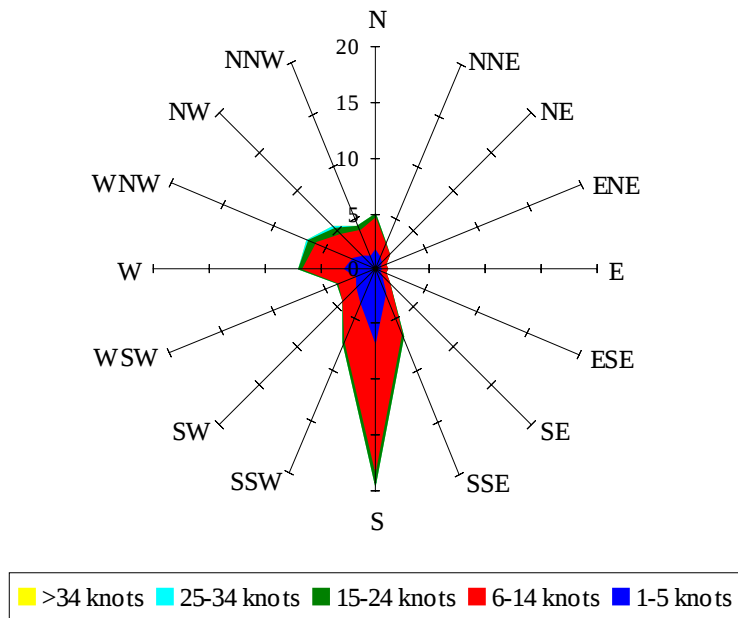
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 16.31

Wind Summary - June, July, and August

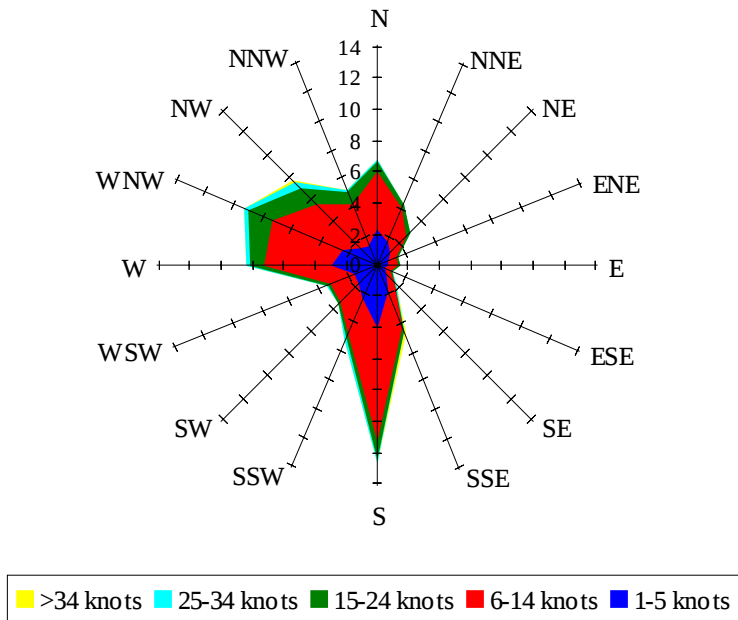
Labels of Percent Frequency on North Axis



Percent Calm = 22.07

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 21.89