SHMYA/EARECKSON AK	
Latitude = 52.72 N	WMO No. 704140
Longitude =174.12 E	Elevation = 98 feet
Period of Record = 1967 to 1996	Average Pressure = 29.56 inches Hg

Design Criteria Data

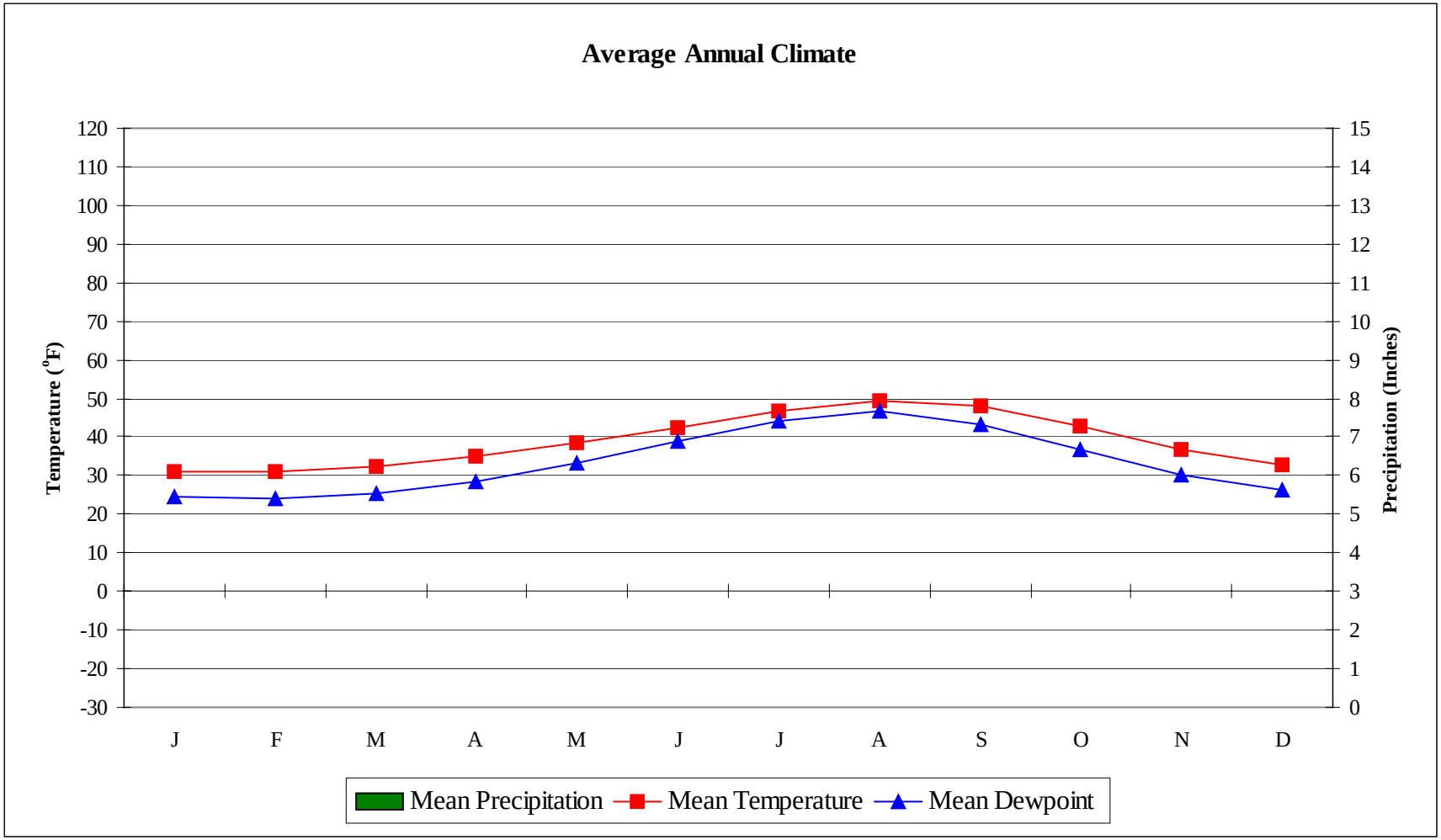
		Mean Coincident (Average) Values			
Dry Bulb Temperature (T)	**Design Value (^oF)**	Wet Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	58	53	54	12.8	W
0.4% Occurrence	55	51	51	13.7	WSW
1.0% Occurrence	53	50	50	14.7	WSW
2.0% Occurrence	52	49	49	14.9	WSW
Mean Daily Range	5	-	-	-	-
97.5% Occurrence	26	24	14	16.9	N
99.0% Occurrence	24	22	13	15.7	N
99.6% Occurrence	21	19	11	13.0	N
Median of Extreme Lows	18	16	9	9.0	NW
		Mean Coincident (Average) Values			
Wet Bulb Temperature (T_{wb})	**Design Value (^oF)**	Dry Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	54	55	57	14.1	WSW
0.4% Occurrence	52	53	54	14.7	WSW
1.0% Occurrence	51	52	52	14.8	SSW
2.0% Occurrence	50	51	51	15.0	SSW
		Mean Coincident (Average) Values			
Humidity Ratio (HR)	**Design Value (gr/lb)**	Dry Bulb Temperature (^oF)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	60	55	0.41	14.6	S
0.4% Occurrence	57	53	0.38	15.0	SSW
1.0% Occurrence	54	52	0.36	14.9	S
2.0% Occurrence	52	51	0.35	15.5	SSW
Air Conditioning/		$T \geq 93^oF$	$T \geq 80^oF$	$T_{wb} \geq 73^oF$	$T_{wb} \geq 67^oF$
Humid Area Criteria	# of Hours	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^oF-RH 60% Latent + Sensible
4	0.8	130	0.0 + 0.0
Ground Water Temperature (^oF) 50 Foot Depth *	**Frost Depth 50 Year Recurrence (in.)**	**Ground Snow Load 50 Year Recurrence (lb/ft^2)**	**Average Annual Freeze-Thaw Cycles (#)**
41.5	52	20	56

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

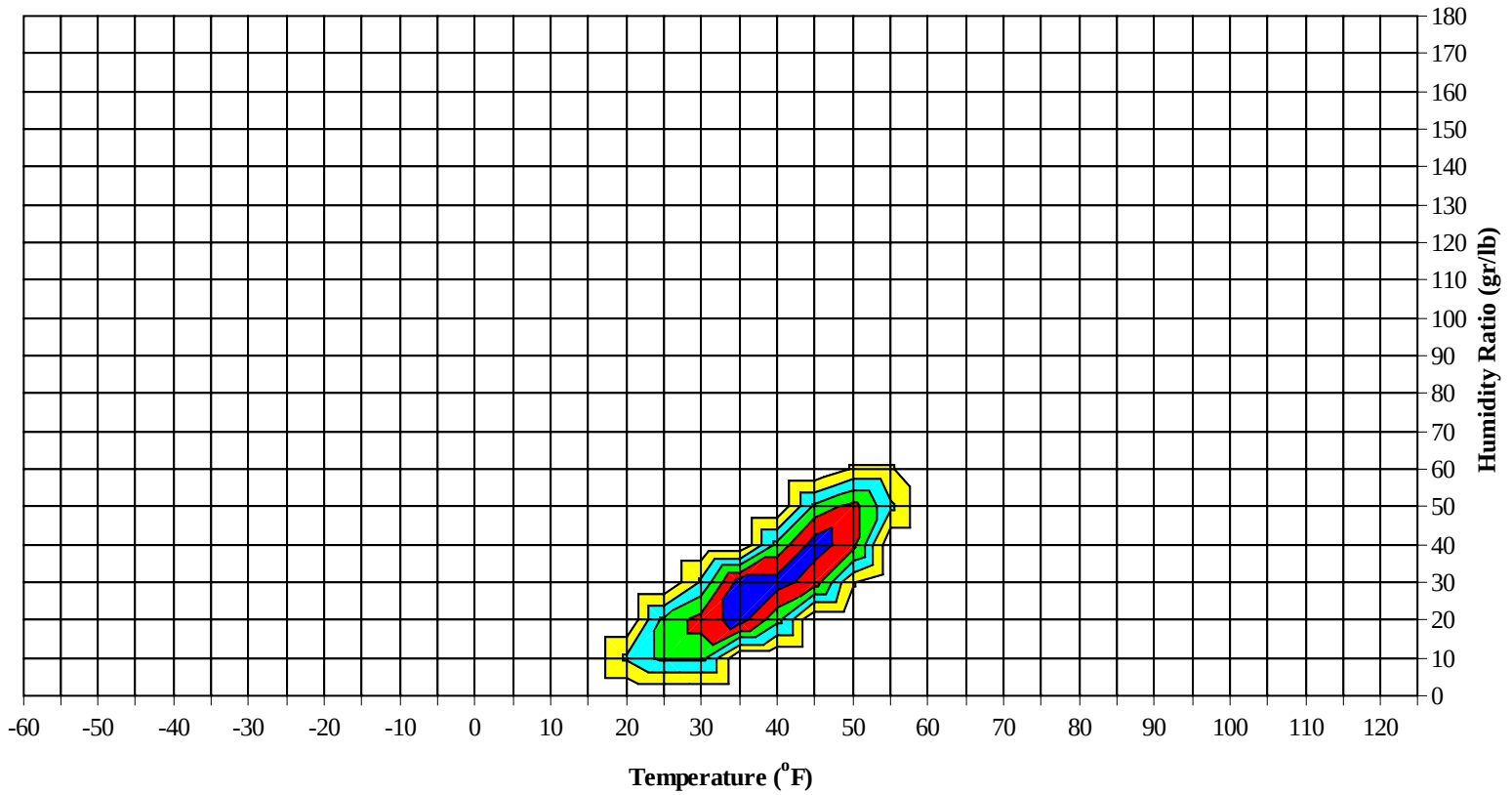
SHMYA/EARECKSON AK WMO No. 704140



No Precipitation Data Available

SHMYA/EARECKSON AK WMO No. 704140

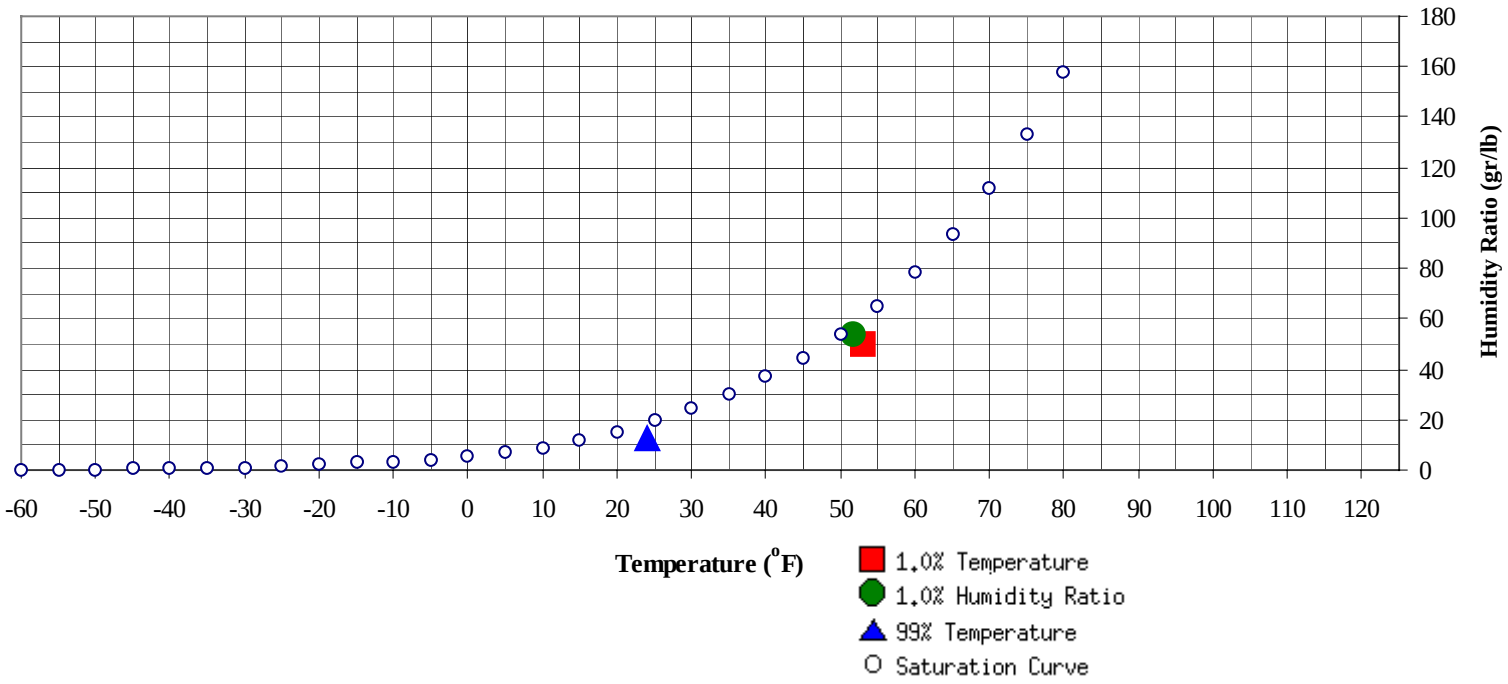
Long Term Psychrometric Summary



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

SHMYA/EARECKSON AK WMO No. 704140

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)
99% Dry Bulb	24	12.3	7.6

	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
1.0% Humidity Ratio	53.9	51.7	50.8	50	20.8

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	53	49.9	50.3	20.5

SHMYA/EARECKSON AK WMO No. 704140

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

Period of Record = 1967 to 1996

Temperature Range (°F)	January Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	February Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	March Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
65 / 69															
60 / 64															
55 / 59															
50 / 54															
45 / 49												1	0	1	40.1
40 / 44	1	2	2	5	38.8	2	3	2	7	38.3	0	4	1	5	37.5
35 / 39	48	55	52	155	34.3	40	53	49	143	34.0	57	86	78	221	34.0
30 / 34	115	118	115	348	29.7	105	105	105	316	29.6	123	119	125	368	29.7
25 / 29	67	60	63	190	24.8	59	53	55	168	24.6	56	33	39	128	24.9
20 / 24	16	12	14	42	20.7	15	9	11	35	20.3	10	5	5	20	20.2
15 / 19	1	1	1	3	16.4	2	1	1	4	16.0	1	0	0	1	15.9
10 / 14	0	0	0	0	11.7	0		0	0	11.2					
5 / 9	0	0		0	8.0										

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.

SHMYA/EARECKSON AK WMO No. 704140

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1967 to 1996

Temperature Range (°F)	April Hour Group (LST) 01 To 08	April 09 To 16	April 17 To 00	April Total Obs	April MCWB (°F)	May Hour Group (LST) 01 To 08	May 09 To 16	May 17 To 00	May Total Obs	May MCWB (°F)	June Hour Group (LST) 01 To 08	June 09 To 16	June 17 To 00	June Total Obs	June MCWB (°F)
65 / 69															
60 / 64															
55 / 59												0		0	49.2
50 / 54							0		0	44.8	0	5	2	7	46.9
45 / 49		1	0	1	41.1	0	7	1	8	42.0	11	62	49	122	43.9
40 / 44	2	22	11	36	37.6	34	121	100	255	38.8	174	157	171	502	40.8
35 / 39	108	146	143	397	34.2	187	113	137	437	35.5	55	16	18	89	37.1
30 / 34	116	67	81	264	30.0	26	7	10	43	30.7	0		0	0	31.7
25 / 29	13	4	5	22	25.4	1	0	0	1	25.6	0			0	27.8
20 / 24	1	0	0	1	20.7	0			0	23.0					
15 / 19	0			0	16.5										
10 / 14															
5 / 9															

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.

SHMYA/EARECKSON AK WMO No. 704140

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)				MCWB	Hour Group (LST)				MCWB	Hour Group (LST)				MCWB
	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)
65 / 69		0		0	58.0										
60 / 64		0	0	0	55.7	0	1	0	1	55.5		0		0	53.0
55 / 59		4	2	6	52.5	1	16	9	26	52.5	0	7	2	9	51.4
50 / 54	10	48	36	93	49.0	62	123	113	298	49.4	37	105	78	221	48.4
45 / 49	153	168	179	500	45.7	178	108	125	410	46.8	161	118	138	417	45.2
40 / 44	83	28	32	142	42.6	7	1	1	9	42.8	37	11	20	68	40.2
35 / 39	2	0	0	2	37.8						4	0	1	5	36.3
30 / 34	0			0	34.0										
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															

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.

SHMYA/EARECKSON AK WMO No. 704140

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)				MCWB	Hour Group (LST)				MCWB	Hour Group (LST)				MCWB
	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)
65 / 69															
60 / 64															
55 / 59															
50 / 54	1	10	3	14	47.3		0		0	42.0					
45 / 49	68	106	86	260	43.7	4	7	4	15	43.5		0	0	0	43.5
40 / 44	125	104	116	345	39.3	50	65	54	169	39.1	8	11	7	26	38.8
35 / 39	49	25	39	112	34.8	113	114	116	342	34.1	80	91	84	255	34.4
30 / 34	6	3	4	13	30.9	63	48	58	169	29.8	109	109	113	331	29.5
25 / 29	0			0	27.0	9	6	8	23	25.5	44	32	38	114	25.1
20 / 24						1	1	0	2	20.5	6	4	5	15	20.4
15 / 19						0			0	17.3	1	1	1	3	16.4
10 / 14											0	0	0	0	10.5
5 / 9											0	0		0	6.5

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.

SHMYA/EARECKSON AK WMO No. 704140

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

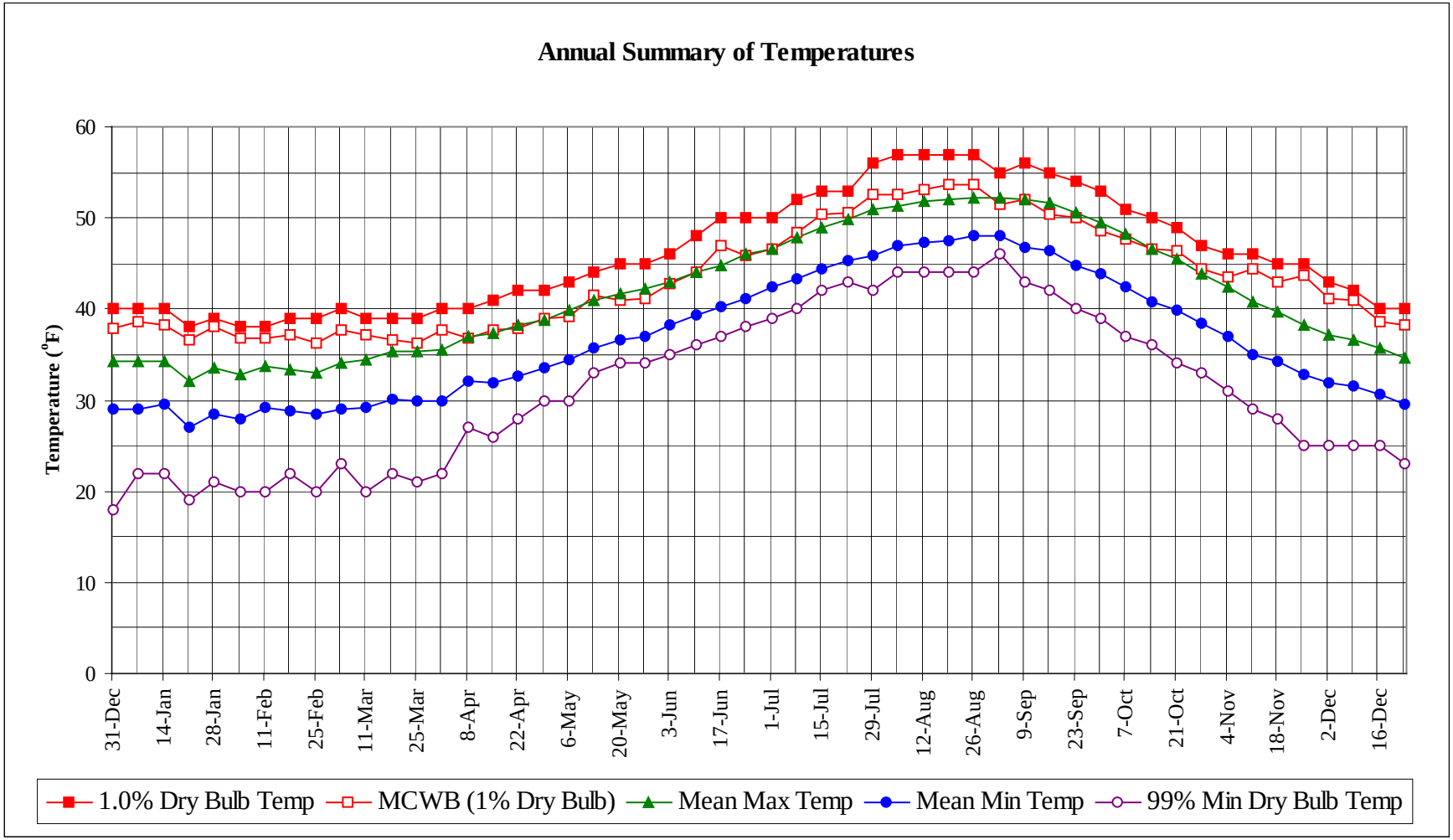
Period of Record = 1967 to 1996

Annual Totals

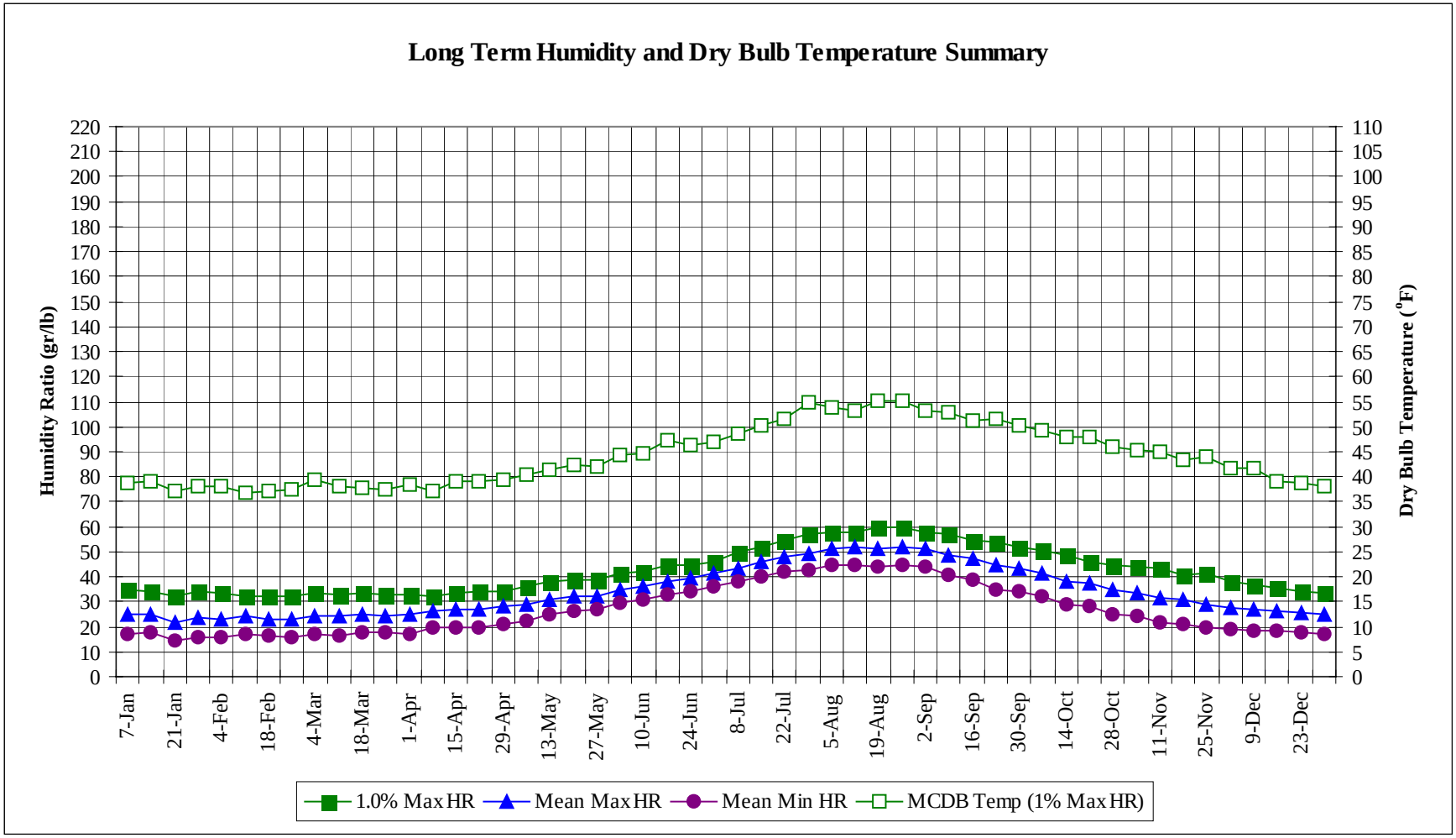
Temperature Range (°F)	Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
65 / 69		0		0	58.0
60 / 64	0	2	0	2	55.3
55 / 59	1	26	13	41	52.3
50 / 54	107	287	228	623	48.9
45 / 49	573	574	576	1723	45.3
40 / 44	521	531	515	1566	40.0
35 / 39	741	700	719	2160	34.6
30 / 34	667	576	616	1859	29.7
25 / 29	253	190	212	655	24.9
20 / 24	51	31	37	118	20.5
15 / 19	5	3	4	12	16.2
10 / 14	1	0	0	1	11.0
5 / 9	0	0		0	7.3

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.

SHMYA/EARECKSON AK WMO No. 704140



SHMYA/EARECKSON AK WMO No. 704140

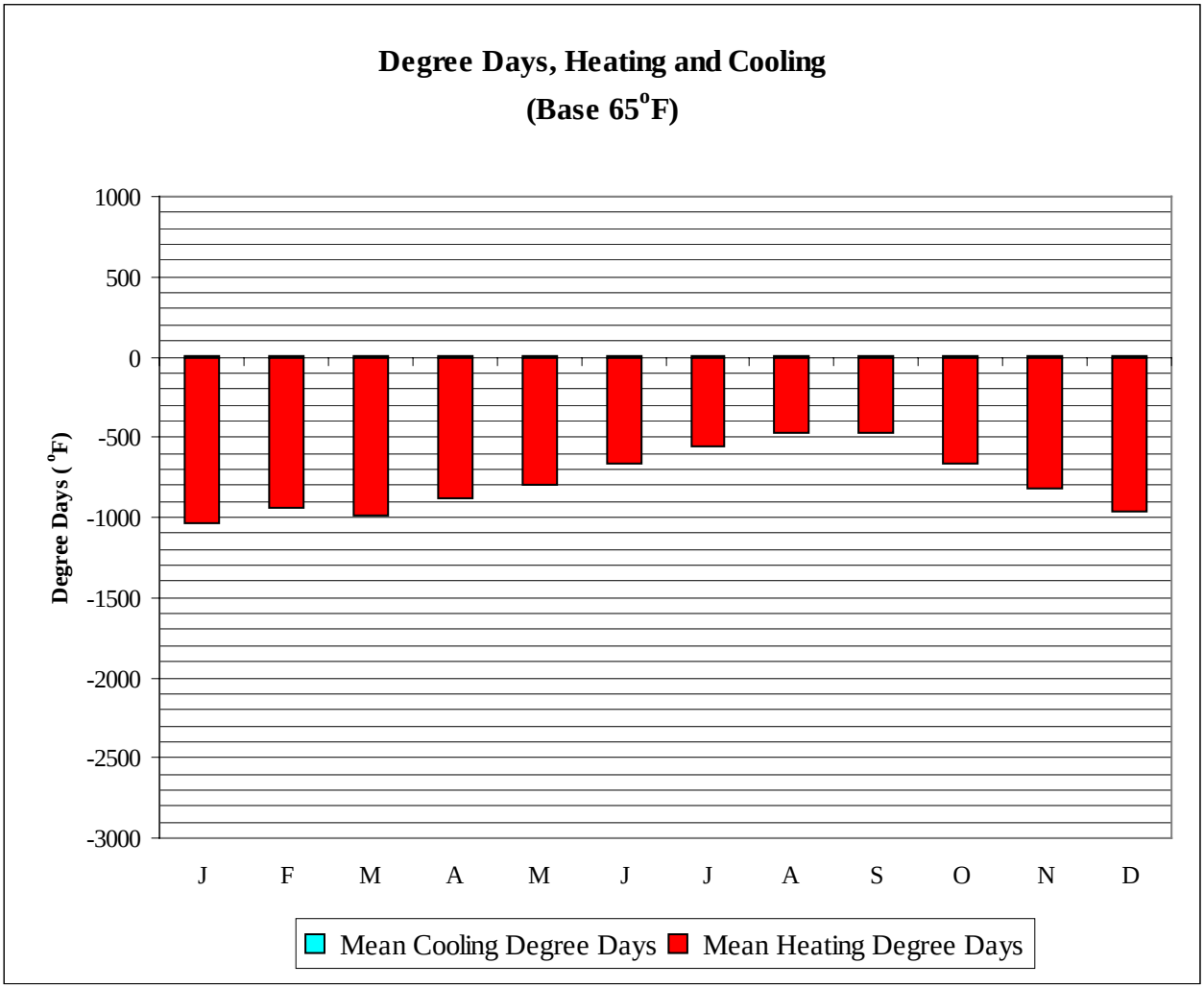


SHMYA/EARECKSON AK WMO No. 704140

Long Term Dry Bulb Temperature and Humidity Summary

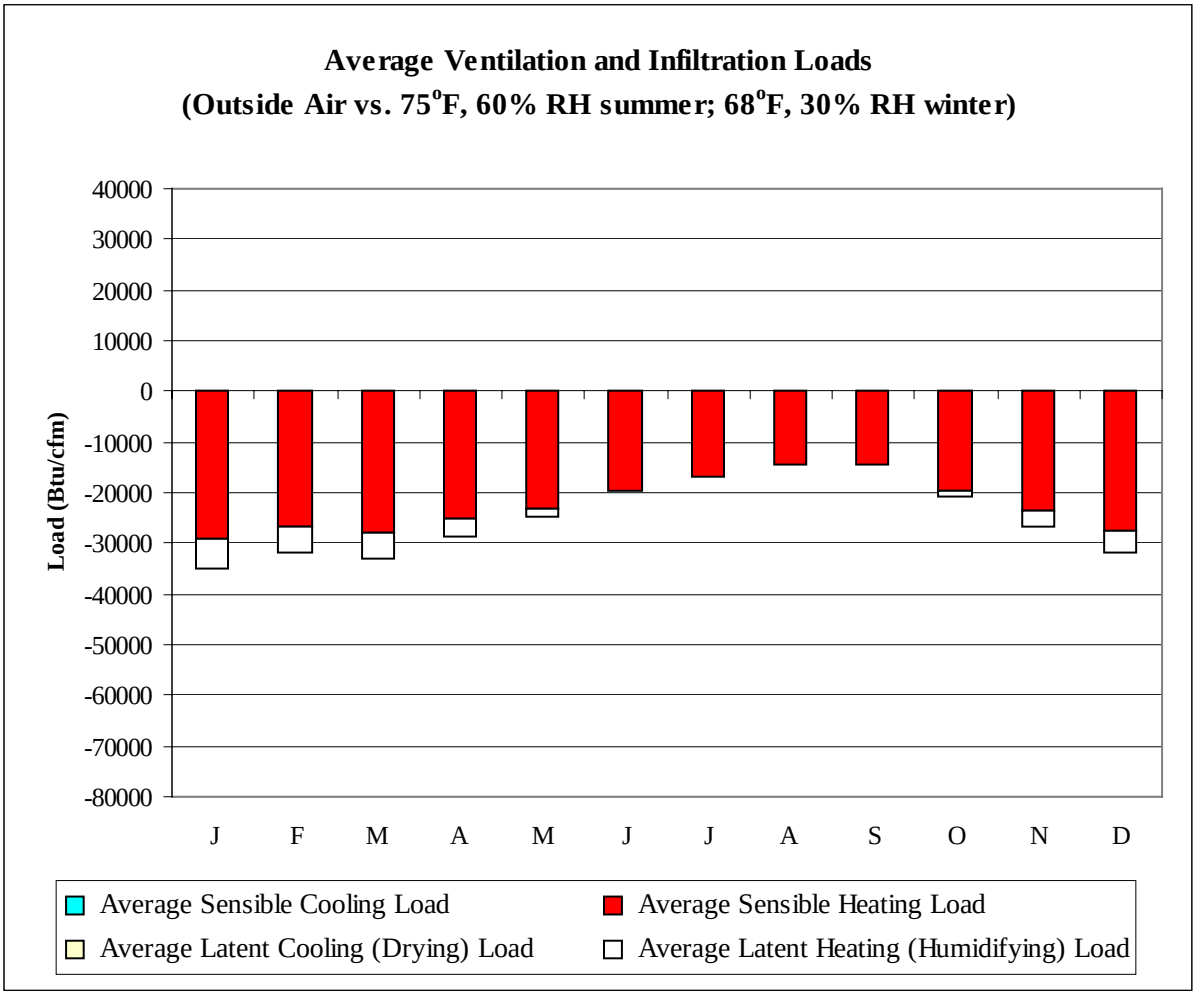
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	40.0	38.6	34.2	29.0	22.0	35.0	38.7	24.9	17.0
14-Jan	40.0	38.2	34.3	29.6	22.0	34.3	39.2	25.2	17.9
21-Jan	38.0	36.6	32.1	26.9	19.0	32.2	37.1	22.0	14.7
28-Jan	39.0	38.2	33.5	28.4	21.0	34.3	38.2	23.7	16.0
4-Feb	38.0	36.8	32.9	27.9	20.0	33.6	38.0	22.9	15.9
11-Feb	38.0	36.7	33.8	29.1	20.0	32.2	36.9	24.1	17.0
18-Feb	39.0	37.1	33.4	28.8	22.0	32.2	37.1	23.1	16.2
25-Feb	39.0	36.2	33.0	28.4	20.0	32.2	37.6	22.7	15.5
4-Mar	40.0	37.8	34.0	29.1	23.0	33.6	39.4	24.3	17.1
11-Mar	39.0	37.2	34.5	29.2	20.0	32.9	38.0	24.4	16.4
18-Mar	39.0	36.6	35.4	30.1	22.0	33.6	37.7	25.3	17.8
25-Mar	39.0	36.3	35.3	30.0	21.0	32.9	37.4	24.4	17.6
1-Apr	40.0	37.8	35.5	29.9	22.0	32.9	38.3	24.7	17.1
8-Apr	40.0	36.7	37.0	32.0	27.0	32.2	37.3	26.1	19.4
15-Apr	41.0	37.7	37.3	32.0	26.0	33.6	39.1	26.6	19.6
22-Apr	42.0	37.9	38.2	32.7	28.0	34.3	39.2	27.1	19.8
29-Apr	42.0	38.9	38.9	33.6	30.0	34.3	39.4	28.0	21.3
6-May	43.0	39.2	39.8	34.4	30.0	36.4	40.4	28.8	22.1
13-May	44.0	41.5	40.9	35.7	33.0	37.8	41.4	31.0	24.6
20-May	45.0	41.0	41.7	36.5	34.0	38.5	42.5	32.2	26.3
27-May	45.0	41.1	42.2	37.0	34.0	38.5	42.1	32.4	26.8
3-Jun	46.0	42.8	43.0	38.3	35.0	41.3	44.2	35.0	29.3
10-Jun	48.0	44.0	44.1	39.3	36.0	42.0	44.6	36.3	30.6
17-Jun	50.0	46.9	44.8	40.3	37.0	44.8	47.2	38.3	32.9
24-Jun	50.0	45.9	46.0	41.1	38.0	44.8	46.3	39.5	33.8
1-Jul	50.0	46.6	46.6	42.4	39.0	46.2	46.8	41.5	36.3
8-Jul	52.0	48.3	47.9	43.3	40.0	49.7	48.6	43.5	37.8
15-Jul	53.0	50.3	48.9	44.4	42.0	51.8	50.4	45.7	39.9
22-Jul	53.0	50.6	49.8	45.3	43.0	54.6	51.6	48.0	41.8
29-Jul	56.0	52.6	51.0	45.8	42.0	57.4	54.9	49.3	42.6
5-Aug	57.0	52.5	51.4	46.9	44.0	58.1	53.8	51.1	44.8
12-Aug	57.0	53.2	51.9	47.3	44.0	58.1	53.3	51.6	44.8
19-Aug	57.0	53.7	52.1	47.5	44.0	59.5	55.1	50.9	44.3
26-Aug	57.0	53.6	52.3	48.1	44.0	59.5	55.0	51.6	44.6
2-Sep	55.0	51.5	52.3	48.0	46.0	58.1	53.3	51.0	44.1
9-Sep	56.0	52.1	52.0	46.8	43.0	57.4	52.8	48.8	40.7
16-Sep	55.0	50.4	51.6	46.3	42.0	54.6	51.2	47.3	38.8
23-Sep	54.0	50.1	50.6	44.7	40.0	53.9	51.4	44.4	35.1
30-Sep	53.0	48.6	49.5	43.8	39.0	51.8	50.1	43.0	33.9
7-Oct	51.0	47.6	48.2	42.4	37.0	50.4	49.3	41.3	31.9
14-Oct	50.0	46.5	46.6	40.7	36.0	48.3	47.8	38.1	28.7
21-Oct	49.0	46.5	45.6	39.8	34.0	46.2	47.8	37.6	28.0
28-Oct	47.0	44.5	43.9	38.4	33.0	44.8	45.8	34.6	25.2
4-Nov	46.0	43.6	42.4	37.0	31.0	44.1	45.5	33.2	24.2
11-Nov	46.0	44.4	40.8	35.0	29.0	43.4	45.0	31.7	21.7
18-Nov	45.0	43.0	39.6	34.2	28.0	40.6	43.3	30.7	21.2
25-Nov	45.0	43.7	38.2	32.9	25.0	41.3	43.9	29.2	19.9
2-Dec	43.0	41.1	37.1	32.0	25.0	37.8	41.7	27.4	18.8
9-Dec	42.0	40.9	36.5	31.5	25.0	37.1	41.6	27.1	18.5
16-Dec	40.0	38.6	35.7	30.6	25.0	35.7	38.9	26.5	18.3
23-Dec	40.0	38.2	34.7	29.6	23.0	34.3	38.7	25.5	17.6
31-Dec	40.0	37.9	34.2	29.0	18.0	33.6	38.2	25.1	17.0

SHMYA/EARECKSON AK WMO No. 704140



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1035
FEB	0	942
MAR	0	989
APR	0	877
MAY	0	801
JUN	0	664
JUL	0	555
AUG	0	474
SEP	0	476
OCT	0	668
NOV	0	823
DEC	0	965
ANN	0	9269

SHMYA/EARECKSON AK WMO No. 704140



	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	-29206	0	-5602
FEB	0	-26604	0	-5201
MAR	0	-28013	0	-5009
APR	0	-25028	0	-3587
MAY	0	-23111	0	-1657
JUN	0	-19504	0	-144
JUL	0	-16734	0	0
AUG	0	-14655	0	-1
SEP	0	-14559	0	-83
OCT	0	-19675	0	-985
NOV	0	-23609	0	-3048
DEC	0	-27377	0	-4646
ANN	0	-268075	0	-29963

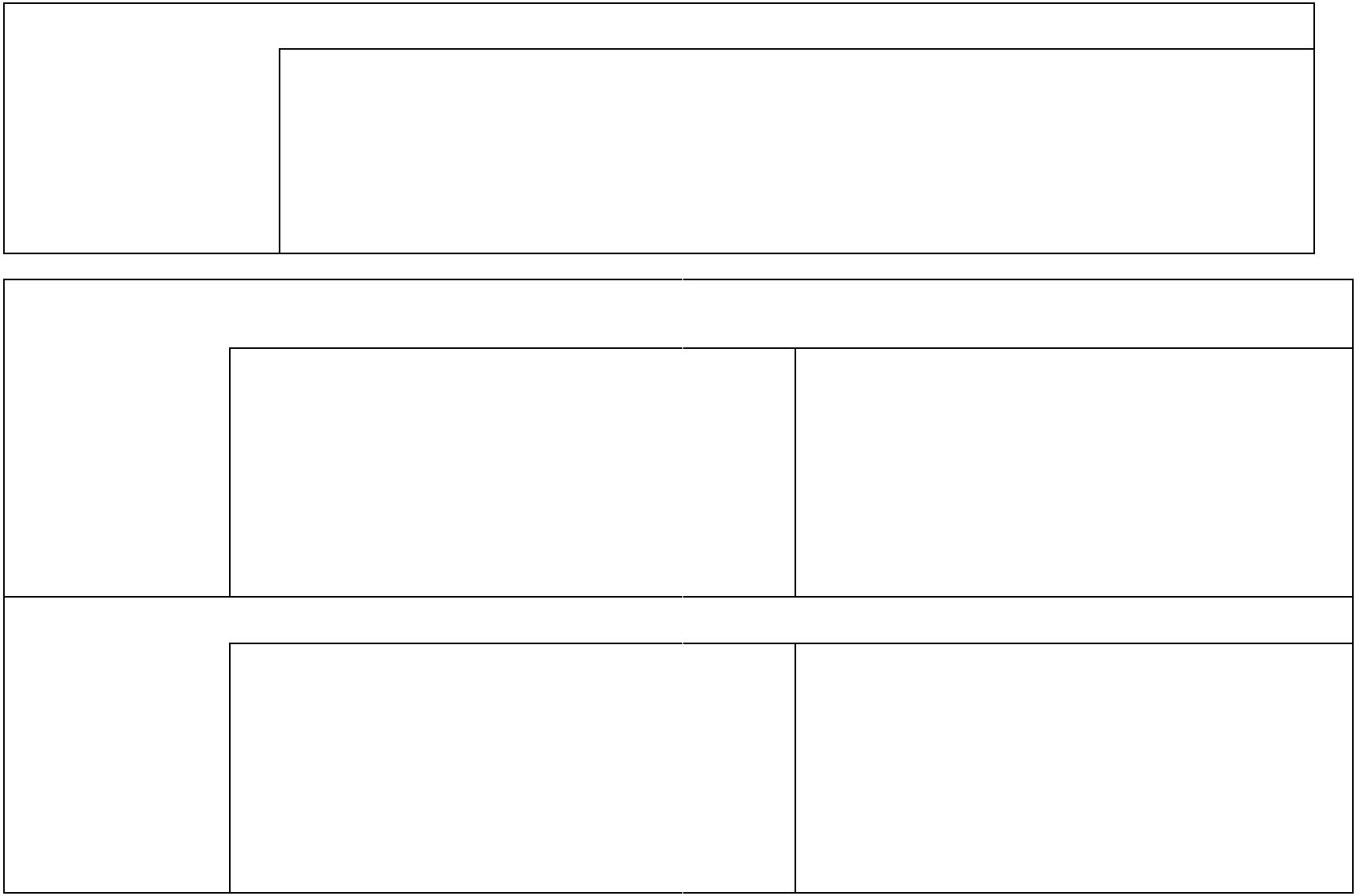
Average Annual Solar Radiation – Nearest Available Site

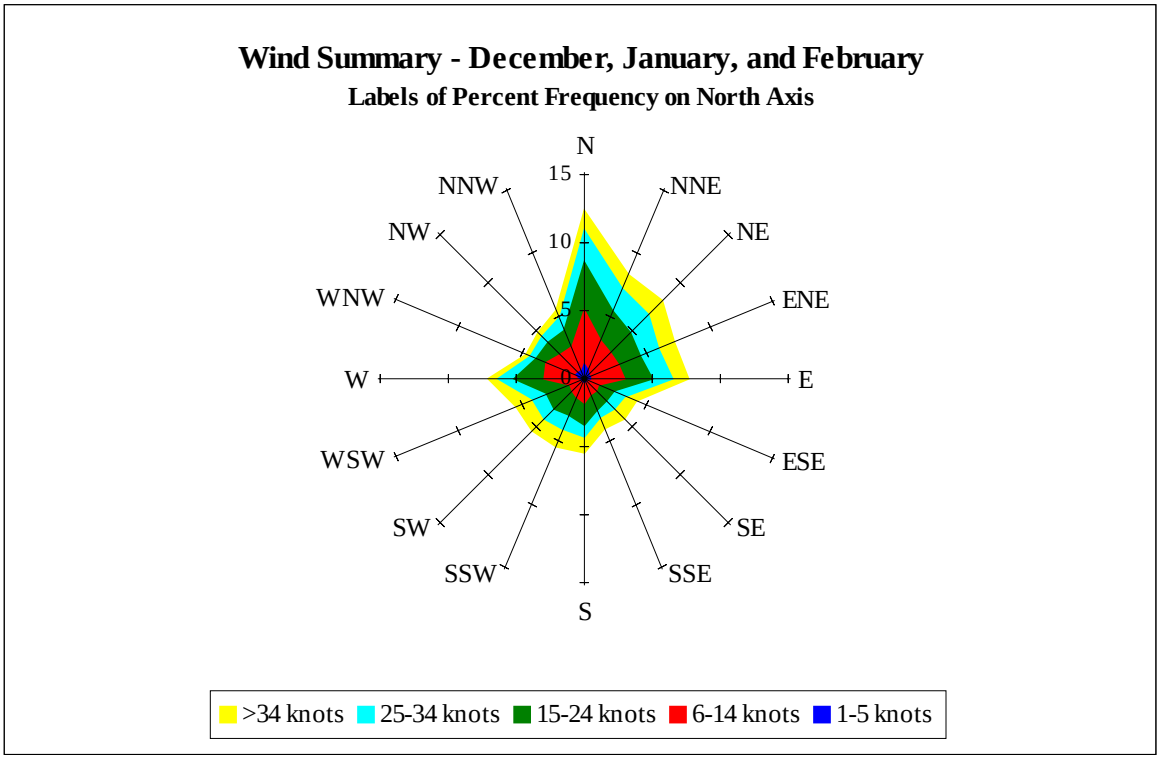
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

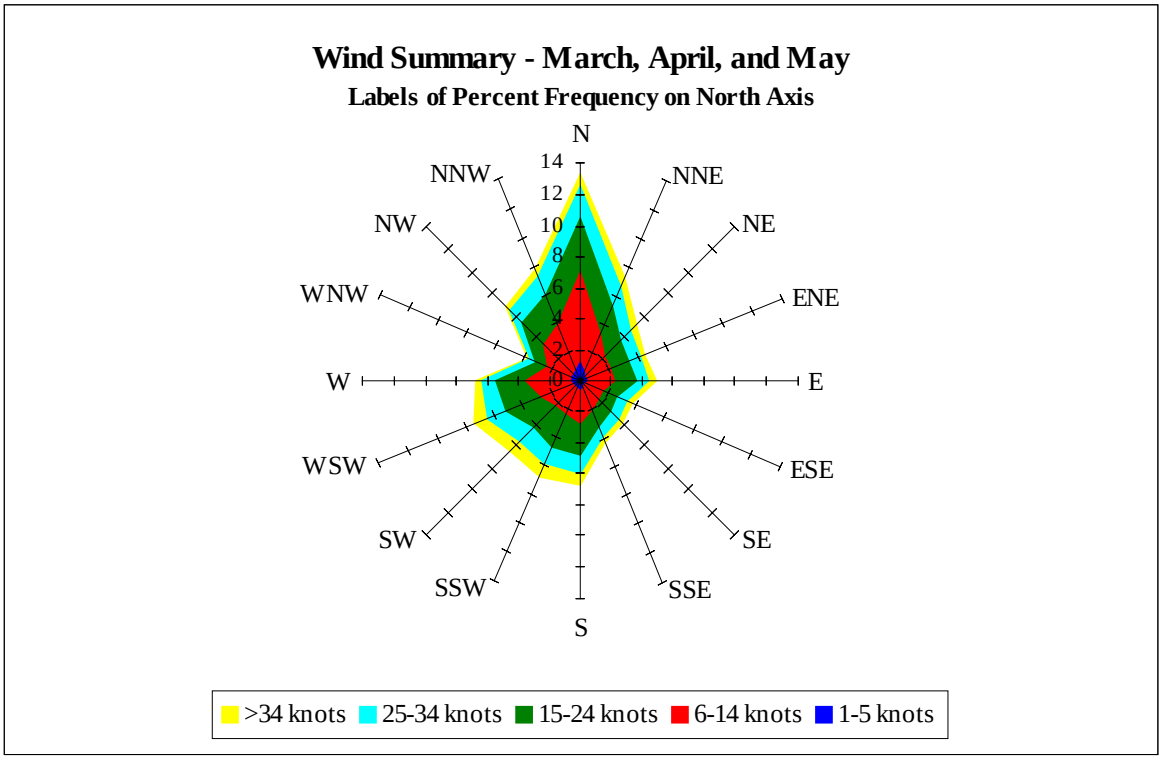
Average Annual Solar Heat and Illumination – Nearest Available Site

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

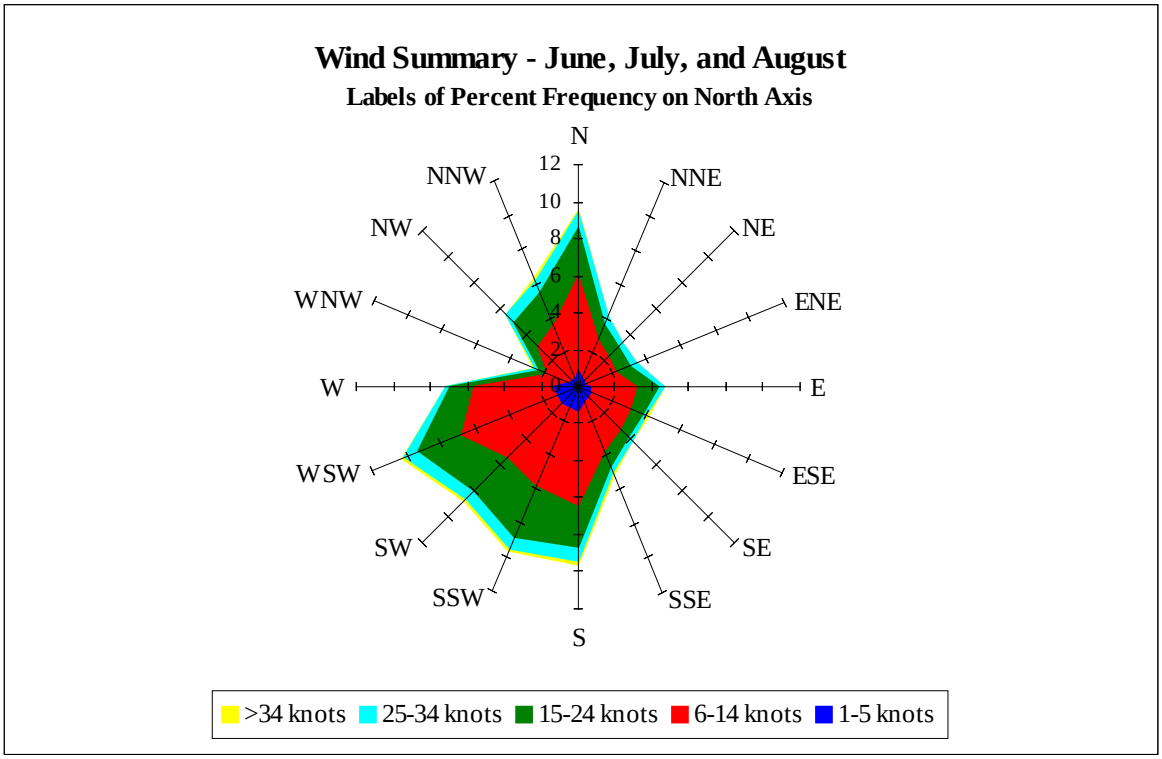




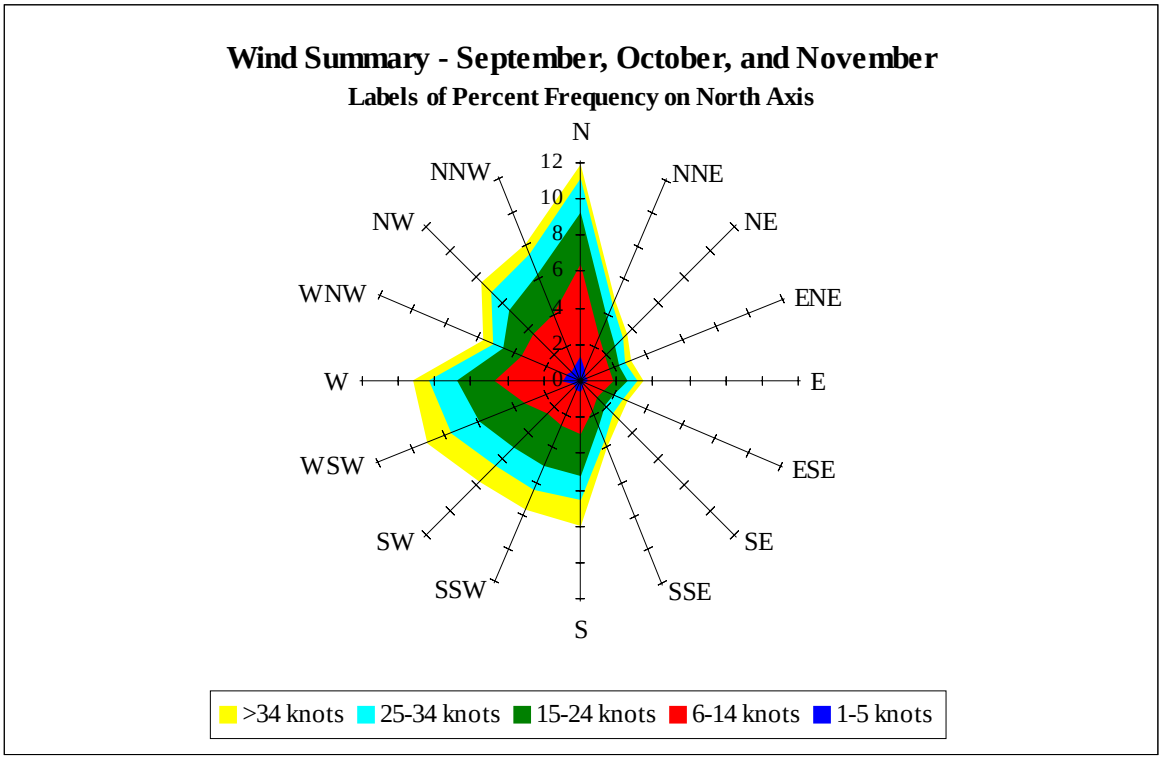
Percent Calm = 1.59



Percent Calm = 1.45



Percent Calm = 1.98



Percent Calm = 1.83