BUTTE/MOONEY MT	
Latitude = 45.95 N	WMO No. 726785
Longitude =112.50 W	Elevation = 5545 feet
Period of Record = 1973 to 1996	Average Pressure = 24.45 inches Hg

Design Criteria Data

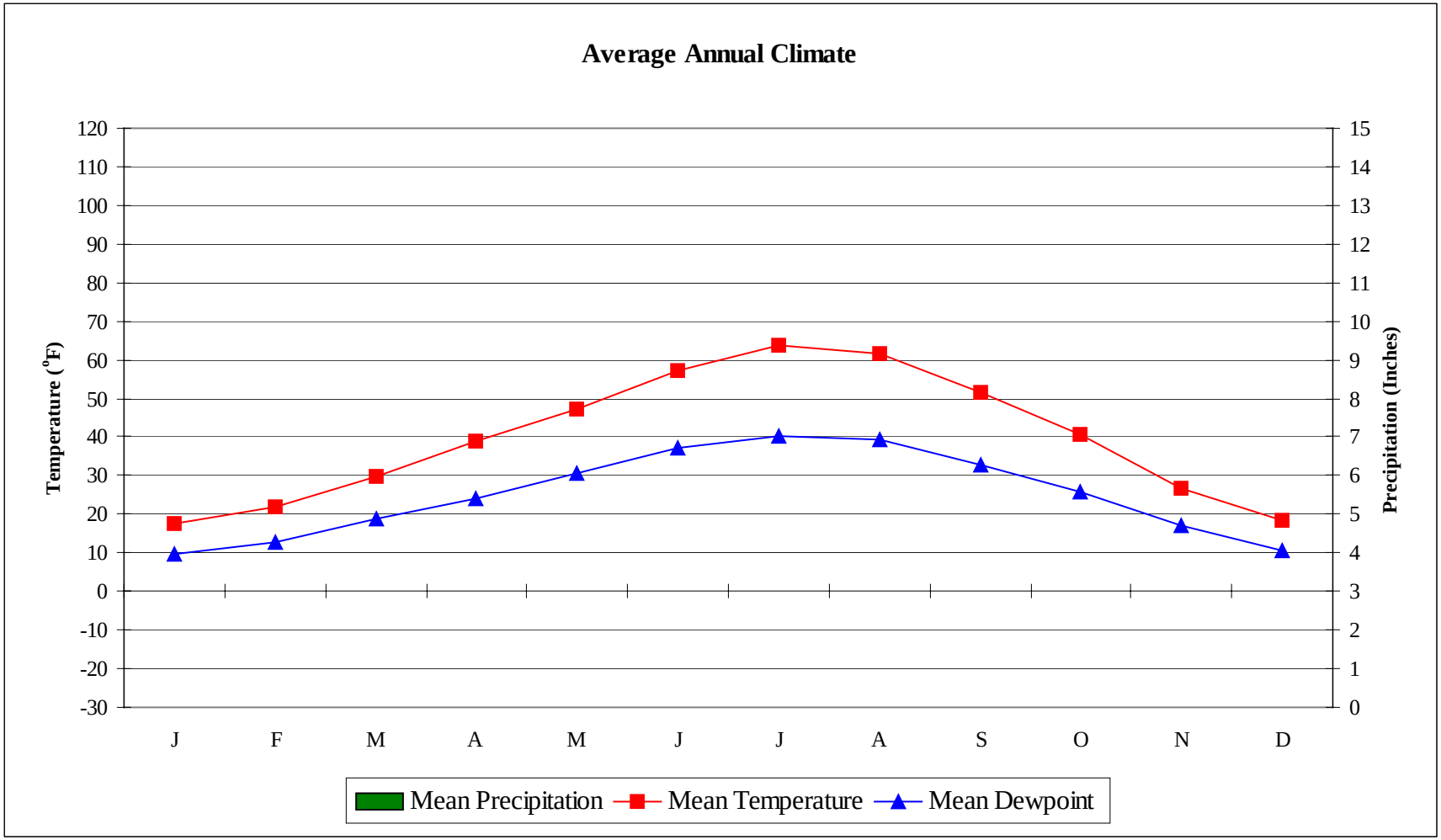
		Mean Coincident (Average) Values			
Dry Bulb Temperature (T)	**Design Value (^oF)**	Wet Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	91	58	37	12.8	SW
0.4% Occurrence	87	57	37	12.0	N
1.0% Occurrence	84	56	38	11.6	N
2.0% Occurrence	81	56	39	11.4	N
Mean Daily Range	26	-	-	-	-
97.5% Occurrence	-5	-6	4	3.3	S
99.0% Occurrence	-16	-16	2	3.2	S
99.6% Occurrence	-25	-25	1	3.7	S
Median of Extreme Lows	-35	-35	1	2.8	S
		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	63	81	73	9.0	SE
0.4% Occurrence	60	78	63	10.1	N
1.0% Occurrence	58	77	56	9.6	N
2.0% Occurrence	57	76	52	9.5	N
		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	91	68	0.50	7.2	WNW
0.4% Occurrence	76	62	0.42	6.0	SSE
1.0% Occurrence	69	62	0.38	6.6	S
2.0% Occurrence	63	61	0.35	6.8	S
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	1	237	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°F-RH 60% Latent + Sensible
4	1.3	90	0.0 + 0.2
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 (#)
42.0	N/A	N/A	127

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

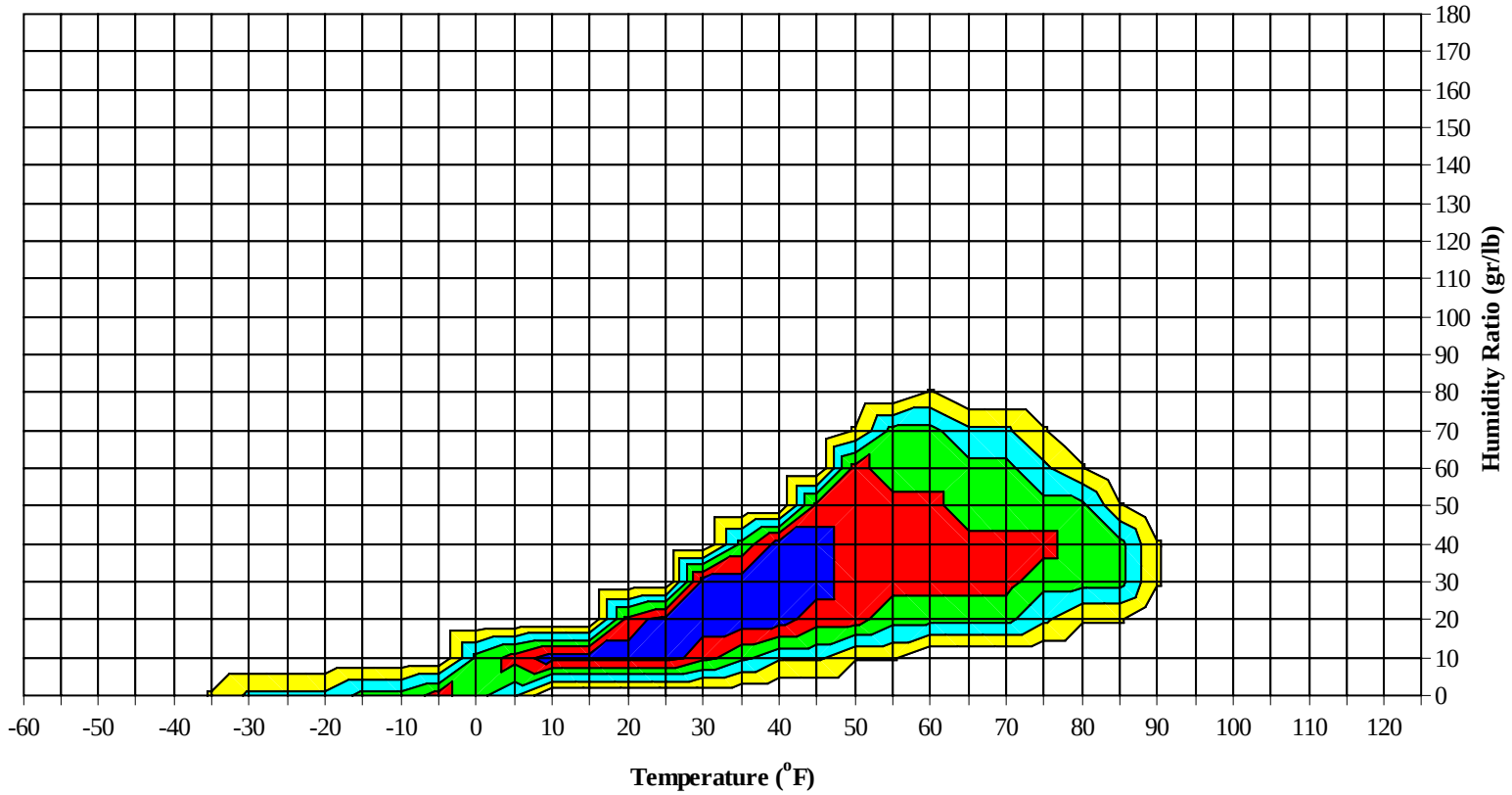
BUTTE/MOONEY MT WMO No. 726785



No Precipitation Data Available

BUTTE/MOONEY MT WMO No. 726785

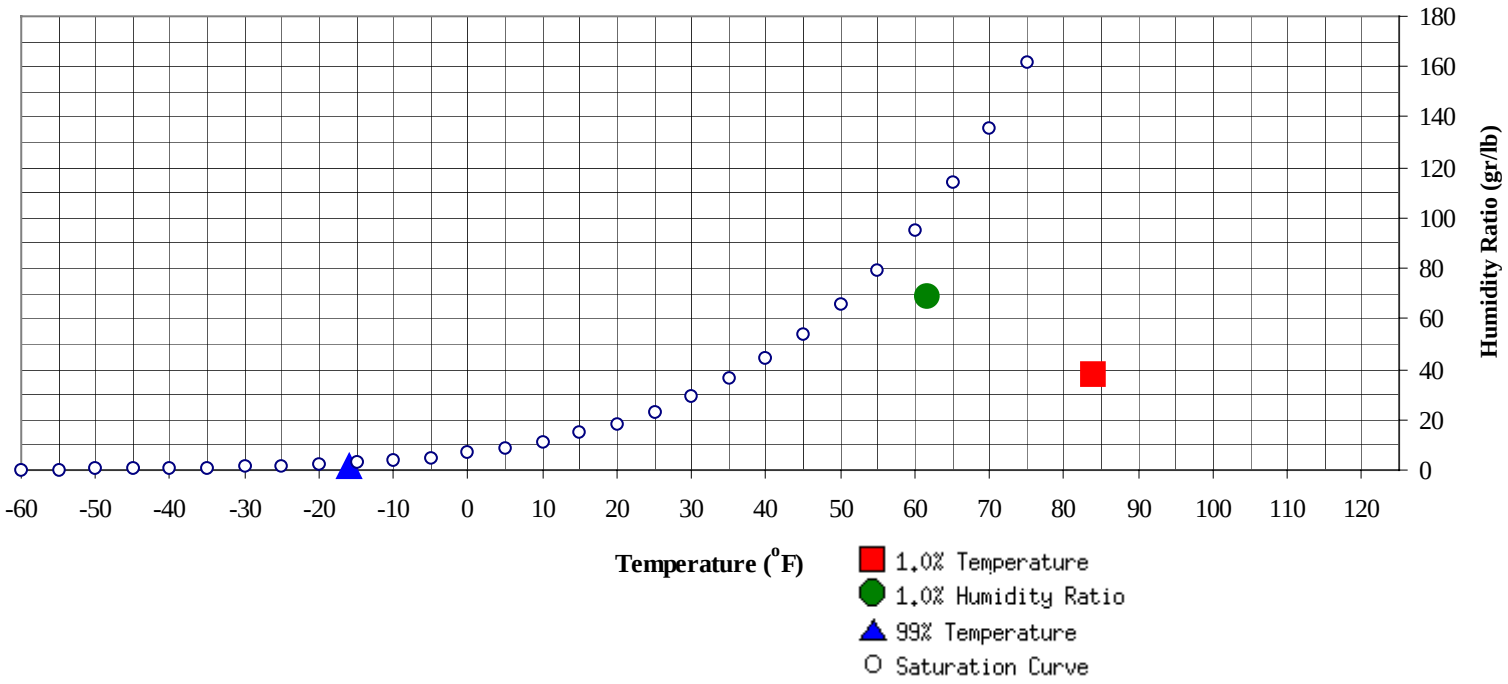
Long Term Psychrometric Summary



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

BUTTE/MOONEY MT WMO No. 726785

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)
99% Dry Bulb	-16	1.8	-3.6

	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
1.0% Humidity Ratio	68.6	61.6	55	51.1	25.4

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	84	38.4	56.4	26.2

BUTTE/MOONEY MT WMO No. 726785

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

Period of Record = 1973 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)
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69												0	0	0	44.9
60 / 64							0		0	44.0		3	1	4	43.1
55 / 59							1	0	1	42.1		7	3	10	41.3
50 / 54		1	0	1	40.2		3	1	4	40.1	0	14	7	21	39.2
45 / 49	1	6	2	9	37.2	1	11	4	16	37.1	1	22	13	36	37.1
40 / 44	4	16	9	29	34.9	3	24	14	42	34.4	4	37	25	66	34.5
35 / 39	13	30	22	65	31.4	13	35	29	77	31.3	16	49	43	108	31.4
30 / 34	23	35	31	90	27.9	23	39	37	99	27.9	50	45	60	155	28.5
25 / 29	33	37	36	106	24.0	36	32	40	108	24.2	58	32	44	134	24.5
20 / 24	31	30	33	94	19.9	38	23	26	87	19.9	51	16	24	91	20.3
15 / 19	26	22	26	75	15.5	25	15	19	59	15.6	23	9	12	44	15.7
10 / 14	24	19	23	66	10.9	18	11	14	42	10.9	19	6	7	32	10.9
5 / 9	19	16	16	50	6.1	17	10	11	37	6.0	10	4	5	18	6.1
0 / 4	20	10	15	45	1.3	14	8	9	30	1.2	7	2	3	12	1.2
-5 / -1	12	7	8	26	-3.1	7	4	6	17	-3.2	3	1	1	5	-2.9
-10 / -6	14	8	9	30	-7.6	8	4	5	17	-7.5	2	1	1	4	-7.3
-15 / -11	6	4	6	16	-12.2	6	2	4	12	-12.1	1	0	0	1	-12.6
-20 / -16	5	4	5	14	-17.2	5	2	2	9	-16.9	1	0	0	1	-16.7
-25 / -21	5	2	3	10	-22.1	2	1	2	5	-21.7	1	0	0	1	-21.6
-30 / -26	5	1	3	9	-27.1	2	1	2	5	-26.8	0			0	-26.3
-35 / -31	4	1	1	6	-31.4	2	0	1	3	-31.8					
-40 / -36	1	0	0	1	-35.5	1	0	0	1	-36.1					
-45 / -41	0	0		0		1		0	1	-41.3					
-50 / -46															

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.

BUTTE/MOONEY MT WMO No. 726785

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

Period of Record = 1973 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)
95 / 99															
90 / 94												1	0	1	59.5
85 / 89							0	0	0	56.5		6	2	8	57.1
80 / 84							2	1	3	54.5		19	8	27	55.6
75 / 79		1	0	1	50.1		9	4	13	51.7	0	27	15	41	54.4
70 / 74		7	2	9	48.4		15	7	22	50.3	1	33	21	55	52.8
65 / 69		10	5	15	46.5	0	20	12	31	48.6	2	35	28	65	51.0
60 / 64	0	16	9	25	44.5	1	33	21	55	46.7	11	36	36	82	49.3
55 / 59	0	21	14	35	42.5	4	35	28	67	44.6	22	31	40	93	47.7
50 / 54	3	27	20	50	40.6	15	41	40	95	42.8	46	28	40	115	45.2
45 / 49	10	35	30	74	37.9	33	38	43	115	40.4	59	15	30	104	42.1
40 / 44	21	41	39	100	35.1	53	30	42	126	37.2	52	7	17	75	38.4
35 / 39	39	37	44	120	32.1	63	18	31	111	33.6	33	2	4	39	34.6
30 / 34	58	28	44	131	28.7	51	7	17	75	30.0	13	0	0	13	30.6
25 / 29	63	13	23	99	24.9	21	1	3	25	25.4	1			1	26.9
20 / 24	27	3	8	38	20.6	5	0	0	5	20.9					
15 / 19	11	1	2	14	15.8	1			1	16.8					
10 / 14	5	1	1	7	11.4	0			0	12.0					
5 / 9	1	0	0	1	6.7										
0 / 4	1	0	0	1	1.7										
-5 / -1	0	0	0	0	-3.0										
-10 / -6	0		0	0	-6.7										
-15 / -11	0			0	-13.8										
-20 / -16	0			0	-16.0										
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															
-45 / -41															
-50 / -46															

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.

BUTTE/MOONEY MT WMO No. 726785

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

Period of Record = 1973 to 1996

Temperature Range (°F)	July Hour Group (LST) 01 To 08	July 09 To 16	July 17 To 00	July Total Obs	July MCWB (°F)	August Hour Group (LST) 01 To 08	August 09 To 16	August 17 To 00	August Total Obs	August MCWB (°F)	September Hour Group (LST) 01 To 08	September 09 To 16	September 17 To 00	September Total Obs	September MCWB (°F)
95 / 99		0		0	62.3										
90 / 94		4	1	5	58.4		3	1	4	58.3		0		0	58.0
85 / 89		20	8	28	57.2		16	6	22	56.5		3	1	4	55.4
80 / 84		41	23	64	56.3		38	17	55	55.5		10	4	14	54.0
75 / 79		44	29	73	55.4		42	25	67	54.8		22	9	31	52.5
70 / 74	1	45	34	80	53.8	0	40	31	71	53.6	0	28	15	43	51.2
65 / 69	5	37	38	80	52.7	2	37	34	73	52.2	0	30	18	48	49.5
60 / 64	23	27	44	94	51.2	14	31	41	86	50.8	2	33	25	59	47.7
55 / 59	42	18	40	100	49.2	29	21	40	89	48.9	6	31	30	68	46.0
50 / 54	71	8	22	102	46.5	63	11	33	107	46.6	17	33	39	89	43.8
45 / 49	64	3	9	76	43.2	71	6	16	93	43.2	36	23	38	98	41.0
40 / 44	32	0	2	34	39.6	47	2	6	55	39.4	56	17	32	106	37.8
35 / 39	8		0	8	35.5	18	0	1	19	35.5	59	6	18	83	34.2
30 / 34	1			1	31.2	4	0	0	4	31.8	42	4	9	55	30.0
25 / 29						0			0	26.8	15	1	1	17	25.9
20 / 24											3	0	1	4	21.1
15 / 19											1		0	1	16.6
10 / 14											1			1	11.5
5 / 9											0			0	7.0
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															
-45 / -41															
-50 / -46															

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.

BUTTE/MOONEY MT WMO No. 726785

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

Period of Record = 1973 to 1996

Temperature Range (°F)	October Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	November Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	December Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
95 / 99															
90 / 94															
85 / 89															
80 / 84		0	0	0	51.9										
75 / 79		3	0	3	51.0										
70 / 74		11	2	13	48.8										
65 / 69		15	4	19	47.1		1		1	45.8					
60 / 64	0	23	8	31	45.1		2	0	2	44.0					
55 / 59	2	26	16	44	43.1	0	5	1	6	42.5		0		0	42.0
50 / 54	5	33	24	62	41.1	2	11	5	18	40.4	0	2	0	2	40.4
45 / 49	8	36	33	77	38.7	7	21	12	41	38.0	2	8	2	12	37.7
40 / 44	21	36	41	98	36.1	11	26	17	54	35.0	8	15	11	34	35.1
35 / 39	46	33	47	127	32.9	20	39	32	91	31.5	11	23	19	53	31.7
30 / 34	68	22	43	133	29.3	34	42	44	120	28.4	21	35	27	83	27.9
25 / 29	51	7	18	75	25.1	41	34	43	118	24.5	29	43	33	106	23.8
20 / 24	28	2	7	37	20.7	35	21	29	86	20.2	32	35	38	105	19.7
15 / 19	13	2	3	18	16.1	25	13	17	56	15.8	29	27	31	88	15.4
10 / 14	4	0	2	6	11.7	20	8	13	41	11.1	25	21	28	73	10.9
5 / 9	1	0	0	1	7.5	14	6	11	30	6.1	24	15	22	60	6.2
0 / 4	0	0	0	0	1.2	11	5	7	22	1.5	24	10	14	48	1.5
-5 / -1	0	0	0	0	-2.5	5	3	4	12	-3.1	13	5	6	23	-2.9
-10 / -6	0	0	0	0	-6.3	6	2	4	12	-7.3	11	3	6	19	-7.6
-15 / -11	0	0		0	-10.3	3	1	1	5	-12.0	6	2	3	11	-12.2
-20 / -16	0			0	-17.2	2	0	1	3	-17.1	5	2	3	10	-16.9
-25 / -21	0			0	-21.0	1	0	0	1	-22.0	2	2	2	6	-22.1
-30 / -26						1		0	1	-26.6	2	1	1	4	-26.8
-35 / -31						0			0	-30.0	1	0	2	3	-31.8
-40 / -36											1	0	1	2	-36.9
-45 / -41											1	0	0	1	-41.0
-50 / -46											0	0		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.

BUTTE/MOONEY MT WMO No. 726785

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

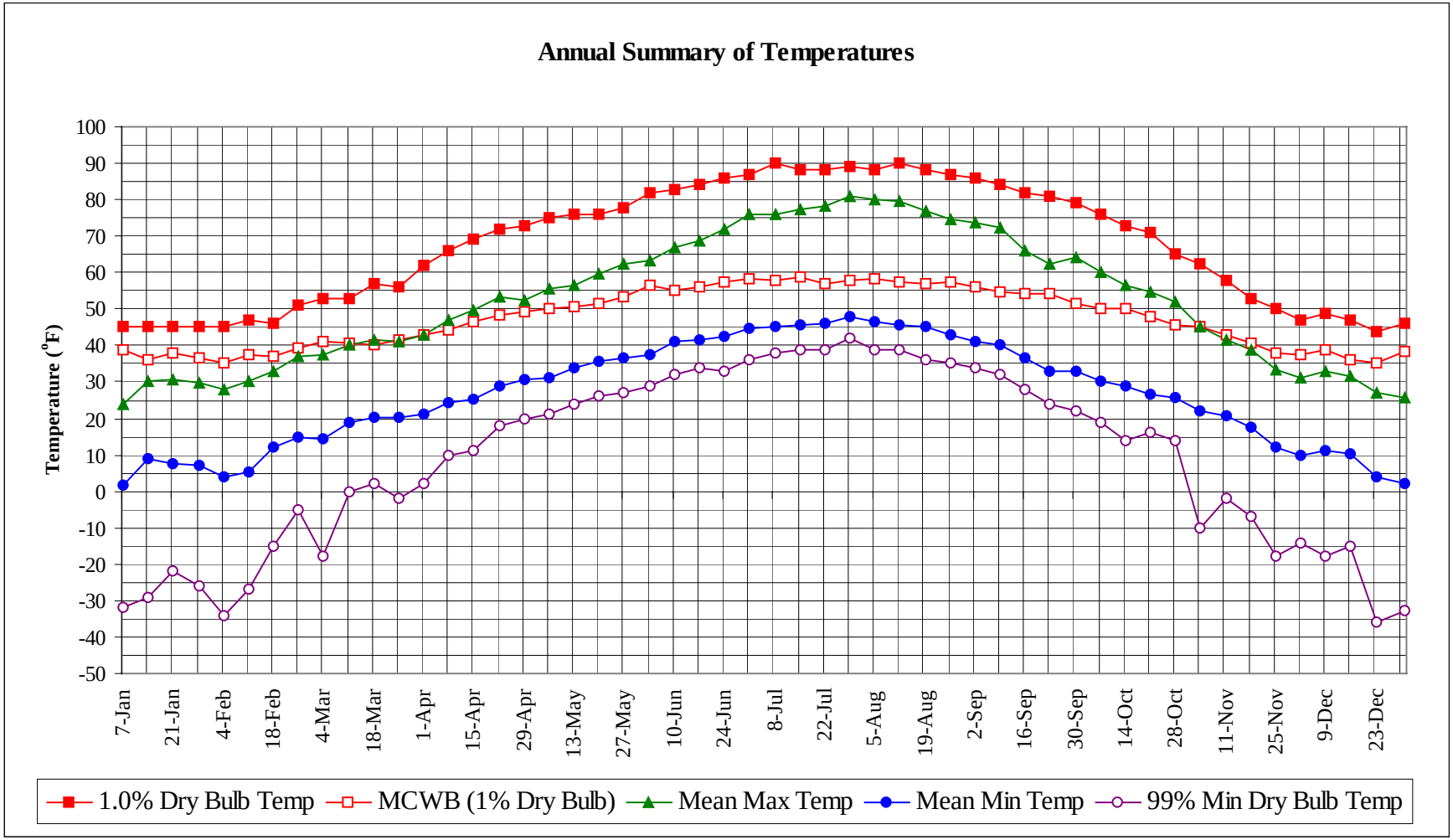
Period of Record = 1973 to 1996

Annual Totals

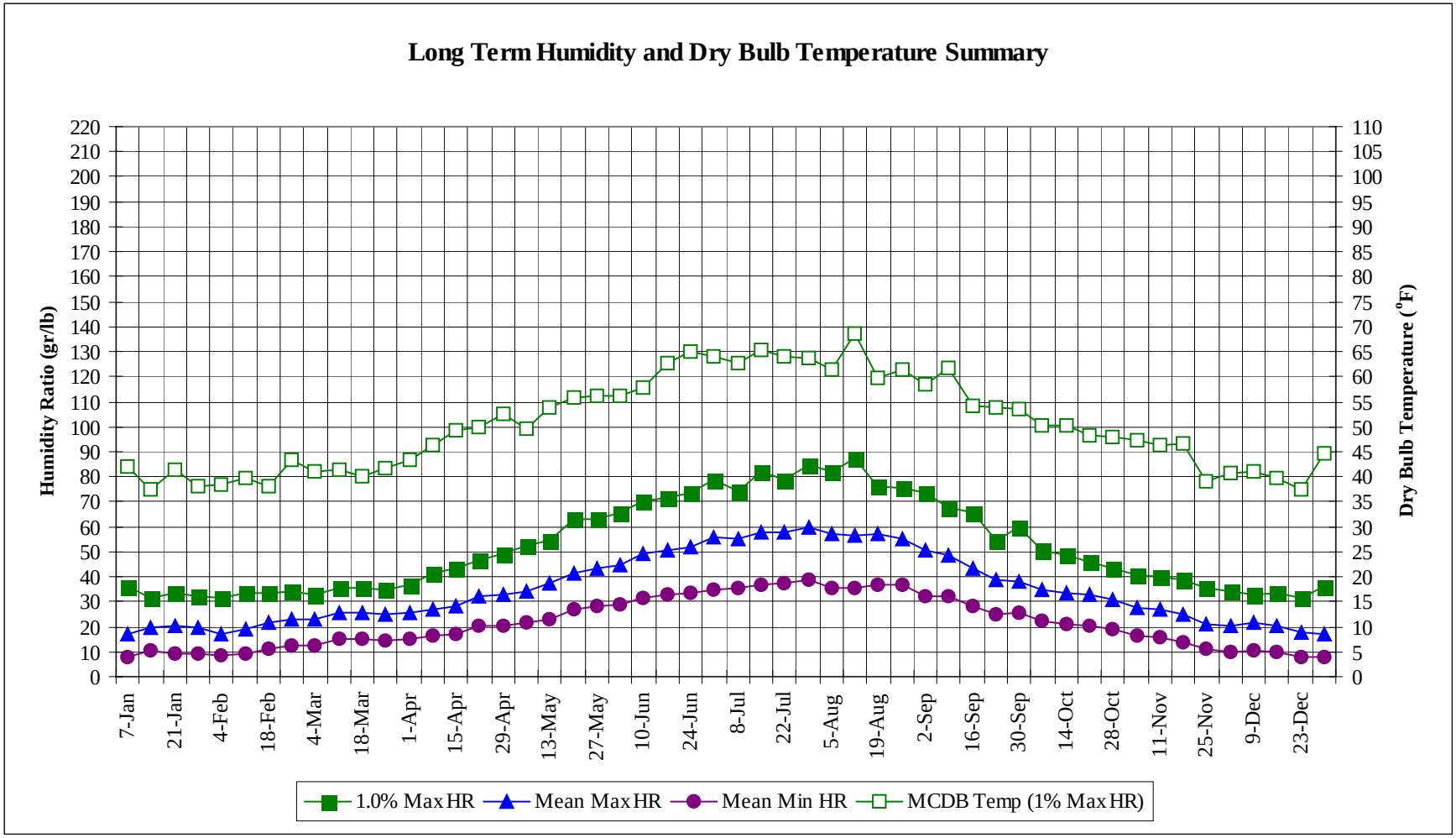
Temperature Range (°F)	Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
95 / 99		0		0	62.3
90 / 94		7	2	9	58.5
85 / 89		44	17	61	56.8
80 / 84		110	51	161	55.7
75 / 79	0	147	79	226	54.3
70 / 74	2	178	109	289	52.6
65 / 69	11	184	135	330	50.8
60 / 64	49	205	179	432	48.8
55 / 59	103	196	209	508	46.6
50 / 54	217	212	227	656	43.9
45 / 49	288	223	229	740	40.4
40 / 44	310	249	255	814	36.5
35 / 39	339	272	291	902	32.5
30 / 34	392	259	315	965	28.7
25 / 29	351	199	245	795	24.5
20 / 24	253	133	169	555	20.1
15 / 19	156	89	115	359	15.6
10 / 14	122	65	88	275	10.9
5 / 9	87	50	65	202	6.1
0 / 4	77	36	48	161	1.4
-5 / -1	41	19	25	85	-3.1
-10 / -6	42	17	25	84	-7.5
-15 / -11	25	10	15	50	-12.2
-20 / -16	18	8	11	37	-17.0
-25 / -21	13	5	8	25	-22.0
-30 / -26	12	3	6	20	-26.9
-35 / -31	7	1	3	11	-31.6
-40 / -36	3	1	1	5	-36.4
-45 / -41	2	0	0	2	-41.1
-50 / -46	0	0		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.

BUTTE/MOONEY MT WMO No. 726785



BUTTE/MOONEY MT WMO No. 726785

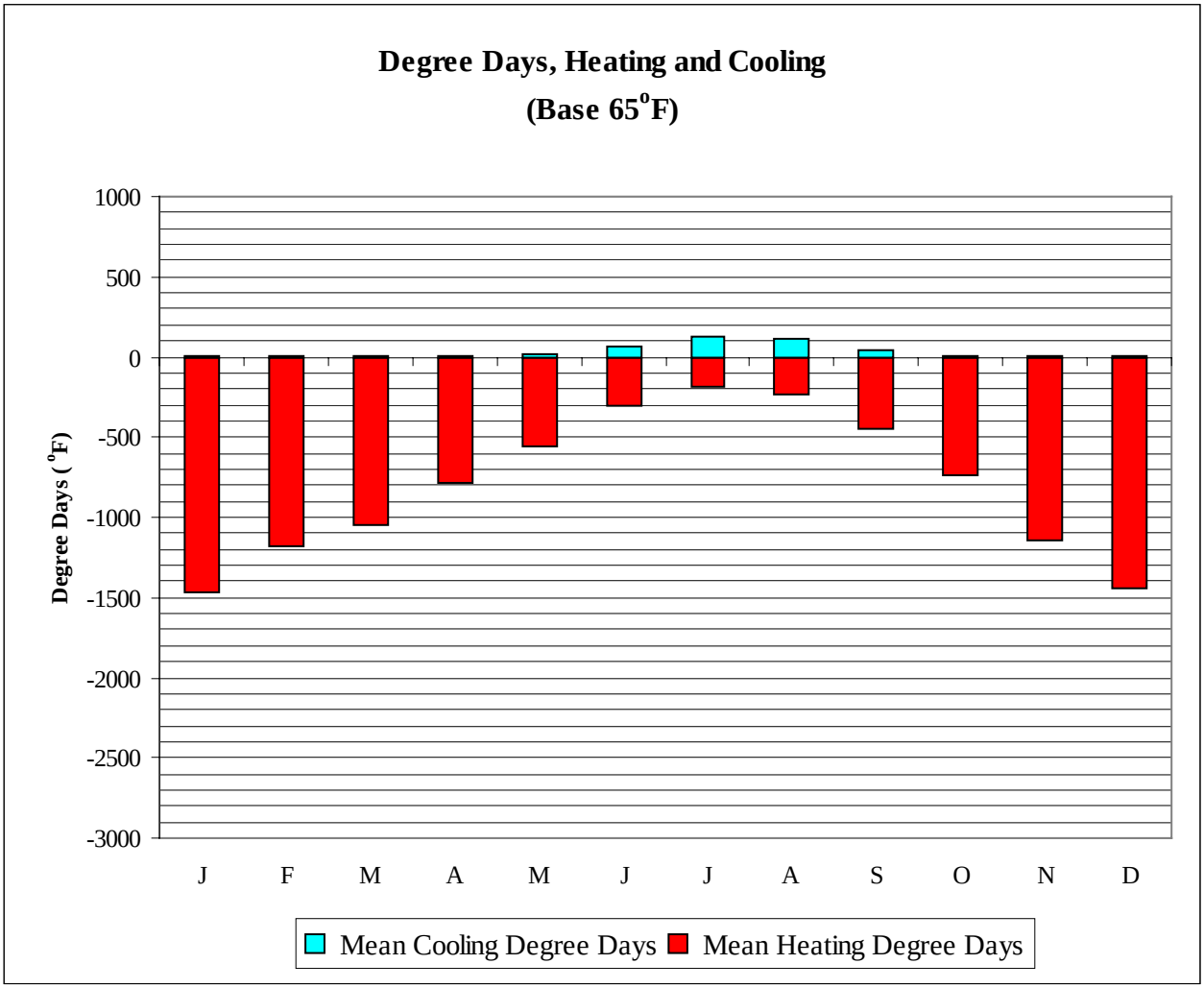


BUTTE/MOONEY MT WMO No. 726785

Long Term Dry Bulb Temperature and Humidity Summary

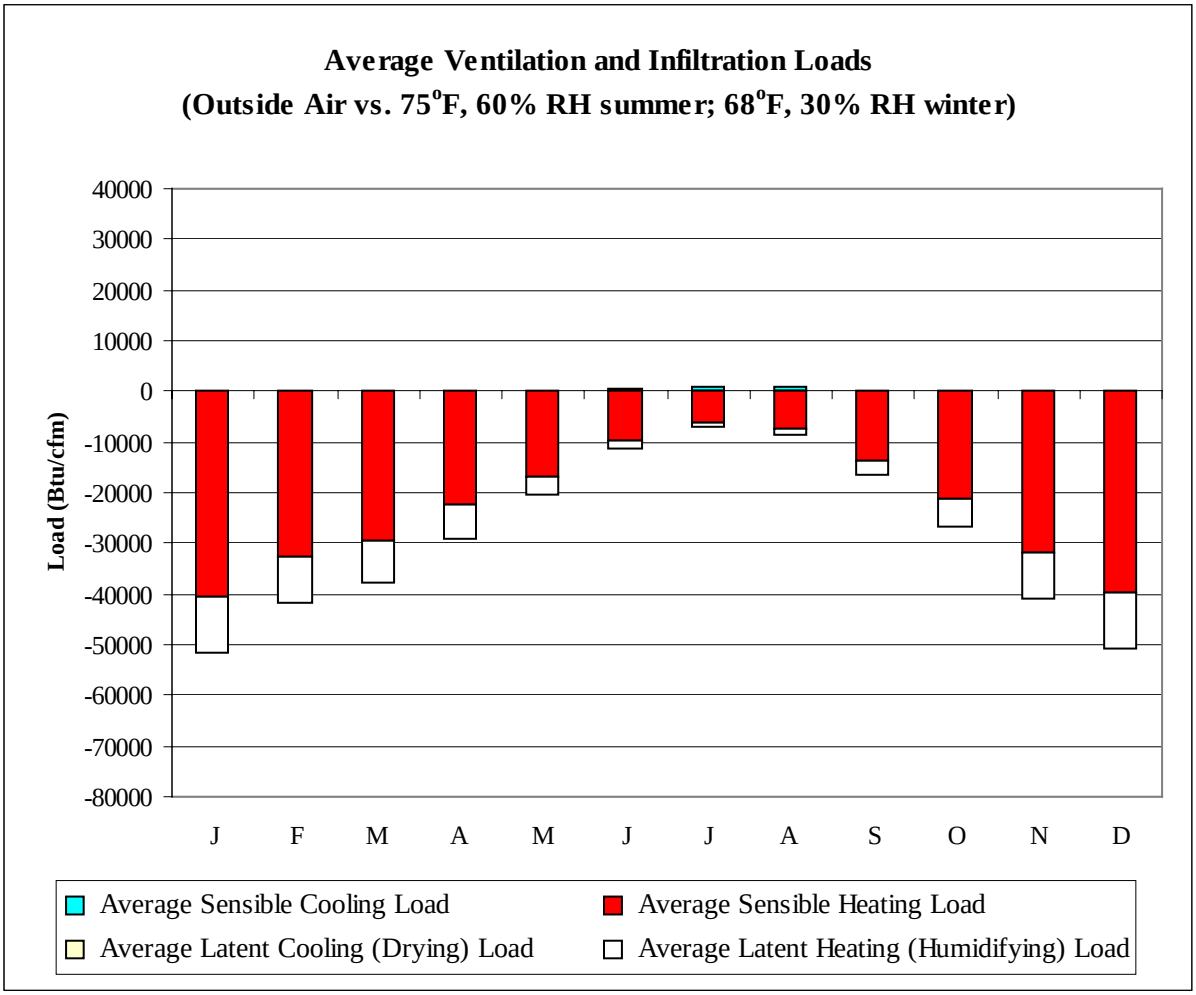
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	45.0	38.8	24.0	1.7	-32.0	36.4	42.0	16.9	7.8
14-Jan	45.0	36.3	30.2	9.0	-29.0	31.5	37.4	20.0	10.2
21-Jan	45.0	37.9	30.5	7.6	-22.0	33.6	41.3	20.1	9.3
28-Jan	45.0	36.4	30.0	7.2	-26.0	32.2	38.1	19.5	9.1
4-Feb	45.0	35.1	28.0	3.9	-34.0	31.5	38.4	17.3	8.7
11-Feb	47.0	37.3	30.3	5.2	-27.0	33.6	39.7	18.8	8.9
18-Feb	46.0	37.2	33.0	11.9	-15.0	33.6	38.1	21.6	11.3
25-Feb	51.0	39.3	37.1	14.8	-5.0	34.3	43.5	22.8	12.3
4-Mar	53.0	40.9	37.3	14.3	-18.0	32.9	41.2	22.8	12.8
11-Mar	53.0	40.4	40.3	19.1	0.0	35.7	41.5	25.7	14.9
18-Mar	57.0	40.2	41.6	20.3	2.0	35.7	40.0	25.6	14.9
25-Mar	56.0	41.4	41.2	20.2	-2.0	35.0	41.9	25.1	14.5
1-Apr	62.0	43.1	42.9	21.4	2.0	37.1	43.3	25.4	15.0
8-Apr	66.0	44.4	47.0	24.3	10.0	41.3	46.4	27.2	16.5
15-Apr	69.0	46.3	49.9	25.1	11.0	43.4	49.2	28.4	17.3
22-Apr	72.0	48.5	53.4	29.1	18.0	46.9	50.0	32.0	20.4
29-Apr	73.0	49.1	52.4	30.6	20.0	49.0	52.5	32.6	20.6
6-May	75.0	50.3	55.6	31.3	21.0	52.5	49.4	34.5	22.0
13-May	76.0	50.7	56.4	33.7	24.0	54.6	53.8	37.1	23.2
20-May	76.0	51.3	59.8	35.5	26.0	63.0	55.9	41.1	26.8
27-May	78.0	53.2	62.3	36.8	27.0	63.0	56.3	43.4	28.1
3-Jun	82.0	56.5	63.2	37.7	29.0	65.8	56.3	44.5	28.8
10-Jun	83.0	55.0	66.7	41.0	32.0	70.0	57.7	49.3	31.5
17-Jun	84.0	55.9	68.6	41.4	34.0	71.4	62.7	50.8	32.9
24-Jun	86.0	57.4	72.1	42.6	33.0	73.5	65.1	52.0	33.2
1-Jul	87.0	58.1	75.8	44.8	36.0	79.1	64.2	55.9	34.6
8-Jul	90.0	57.8	76.1	45.2	38.0	74.2	62.9	54.9	35.3
15-Jul	88.0	58.6	77.3	45.8	39.0	81.9	65.2	57.9	36.9
22-Jul	88.0	57.1	78.3	46.2	39.0	79.1	64.0	58.1	37.4
29-Jul	89.0	57.7	81.0	48.1	42.0	84.7	63.7	59.9	38.9
5-Aug	88.0	58.1	80.1	46.4	39.0	81.9	61.4	57.0	35.2
12-Aug	90.0	57.5	79.6	45.8	39.0	87.5	68.6	56.5	35.5
19-Aug	88.0	56.8	77.0	45.0	36.0	76.3	59.8	57.2	36.8
26-Aug	87.0	57.2	74.4	43.1	35.0	75.6	61.5	55.2	36.5
2-Sep	86.0	55.9	73.6	41.2	34.0	73.5	58.3	50.3	32.3
9-Sep	84.0	54.7	72.2	40.1	32.0	67.9	61.8	48.3	31.9
16-Sep	82.0	54.1	66.2	36.7	28.0	65.8	54.3	43.2	28.5
23-Sep	81.0	54.4	62.5	32.7	24.0	54.6	53.9	38.5	24.7
30-Sep	79.0	51.6	64.3	33.1	22.0	59.5	53.4	38.1	25.3
7-Oct	76.0	50.3	59.9	30.1	19.0	50.4	50.4	35.1	22.1
14-Oct	73.0	49.9	56.6	28.7	14.0	48.3	50.3	33.3	20.8
21-Oct	71.0	47.9	54.9	26.7	16.0	46.2	48.4	33.0	20.4
28-Oct	65.0	45.5	52.0	25.6	14.0	43.4	48.1	30.8	19.2
4-Nov	62.5	45.1	45.0	21.9	-10.0	40.6	47.2	27.5	16.6
11-Nov	58.0	42.9	41.6	20.7	-2.0	39.9	46.4	26.9	15.7
18-Nov	53.0	40.6	39.0	17.5	-7.0	38.5	46.8	24.9	14.1
25-Nov	50.0	38.1	33.4	12.2	-18.0	35.7	39.1	21.2	10.9
2-Dec	47.0	37.5	31.2	9.8	-14.0	34.3	40.7	20.5	10.0
9-Dec	49.0	38.7	32.9	11.0	-18.0	32.9	41.0	21.4	10.8
16-Dec	47.0	36.1	31.5	10.2	-15.0	33.6	39.9	20.5	9.8
23-Dec	44.0	35.0	26.9	3.9	-36.0	31.5	37.5	17.5	8.0
31-Dec	46.0	38.4	25.8	2.2	-33.0	36.4	44.5	17.2	7.6

BUTTE/MOONEY MT WMO No. 726785



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1470
FEB	0	1175
MAR	0	1048
APR	4	782
MAY	16	561
JUN	61	307
JUL	129	184
AUG	111	230
SEP	40	449
OCT	6	732
NOV	0	1145
DEC	0	1440
ANN	366	9523

BUTTE/MOONEY MT WMO No. 726785



	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	-40515	0	-11177
FEB	0	-32561	0	-9122
MAR	0	-29497	0	-8376
APR	1	-22551	0	-6423
MAY	46	-16795	0	-3690
JUN	361	-9764	1	-1472
JUL	976	-6234	1	-693
AUG	822	-7521	1	-916
SEP	188	-13605	0	-2680
OCT	6	-21218	0	-5460
NOV	0	-32004	0	-8772
DEC	0	-39739	0	-11131
ANN	2400	-272004	3	-69912

Average Annual Solar Radiation – Nearest Available Site

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

City: HELENA
State: MT
WBAN No: 24144
Lat(N): 46.6
Long(W): 112
Elev(ft): 3898

Stn Type: Secondary
SHADING GEOMETRY IN DIMENSIONLESS UNITS
Window: 1
Overhang: 0.724
Vert Gap: 0.329

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	460	730	1110	1510	1820	2050	2220	1870	1390	920	530	390	1250
	Std Dev	36	48	83	118	128	154	111	125	133	69	34	26	29
	Minimum	390	660	920	1330	1610	1790	1980	1620	1130	800	460	340	1210
	Maximum	530	870	1310	1780	2060	2390	2410	2140	1650	1060	580	440	1320
	Diffuse	260	370	530	670	760	750	600	540	460	350	270	220	480
Clear Day	Global	660	1020	1570	2160	2580	2750	2650	2280	1750	1160	730	560	1660
NORTH	Global	160	230	320	430	560	650	630	470	340	240	170	130	360
	Diffuse	160	230	320	420	490	520	490	420	340	240	170	130	330
Clear Day	Global	130	190	270	400	600	740	680	450	300	210	140	110	350
EAST	Global	330	510	730	940	1130	1240	1380	1210	930	650	380	290	810
	Diffuse	200	280	410	520	590	610	580	510	420	310	210	170	400
Clear Day	Global	590	830	1140	1440	1610	1660	1620	1460	1230	910	630	510	1140
SOUTH	Global	870	1100	1180	1100	980	950	1080	1200	1310	1270	950	810	1070
	Diffuse	310	400	490	550	580	580	550	520	470	400	320	280	450
Clear Day	Global	1870	2030	1990	1670	1330	1170	1220	1480	1830	2000	1880	1760	1680
WEST	Global	340	520	730	930	1060	1170	1270	1120	920	650	390	290	780
	Diffuse	200	290	410	520	590	620	590	520	420	310	220	170	410
Clear Day	Global	590	830	1140	1440	1610	1660	1620	1460	1230	910	630	510	1140

Average Annual Solar Heat and Illumination – Nearest Available Site

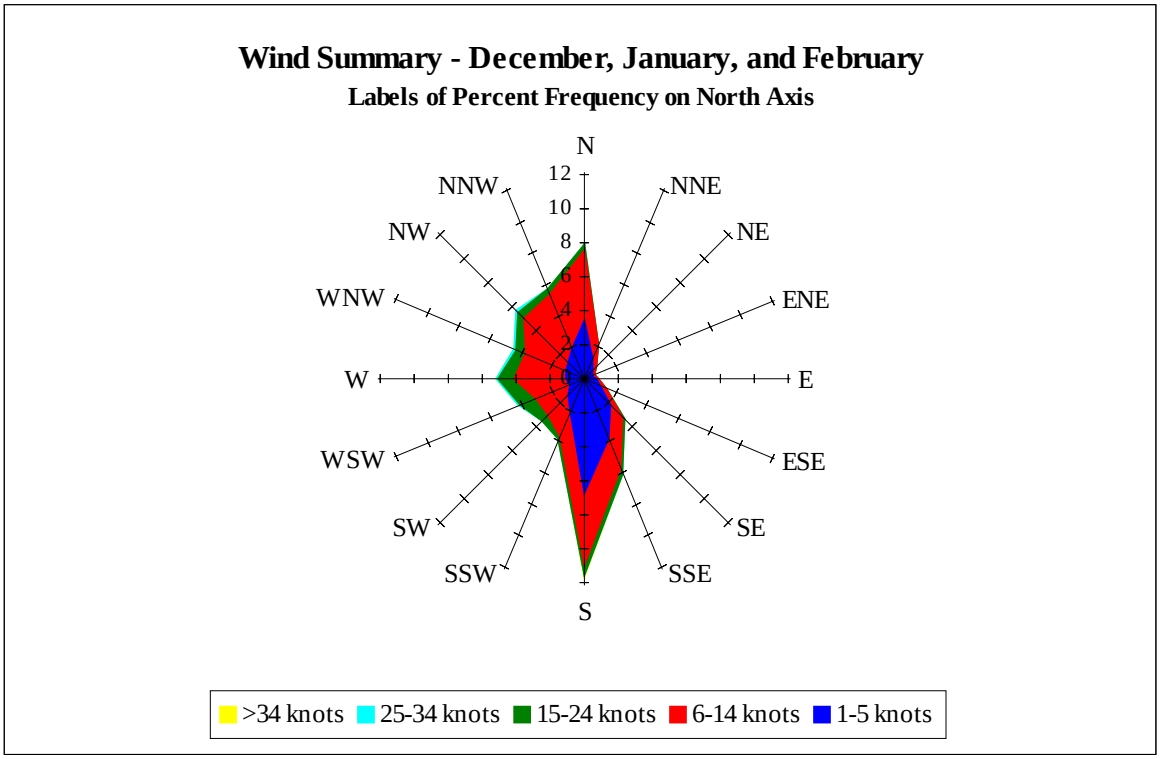
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9

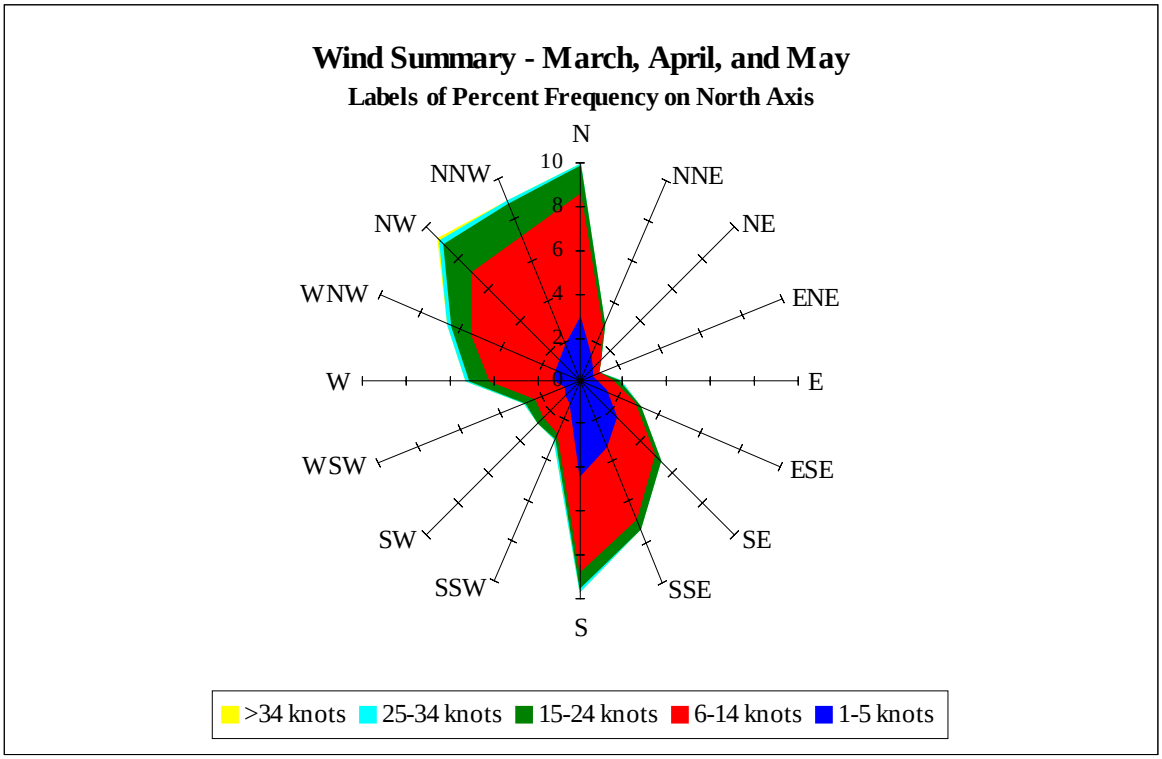
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	280	480	770	1070	1310	1490	1620	1350	980	610	330	230	880
NORTH	Unshaded	110	160	220	290	370	420	400	310	230	170	120	92	240
	Shaded	88	130	190	250	310	360	350	270	200	150	96	75	210
EAST	Unshaded	230	350	520	680	810	890	990	880	660	460	260	190	580
	Shaded	190	300	430	550	640	700	790	710	550	380	220	160	470
SOUTH	Unshaded	660	820	840	740	630	590	660	780	910	930	720	620	740
	Shaded	630	740	620	420	330	340	330	360	580	790	690	600	530
WEST	Unshaded	230	360	520	660	760	840	910	810	660	460	270	200	560
	Shaded	200	310	430	530	600	660	720	650	550	380	230	170	450

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9

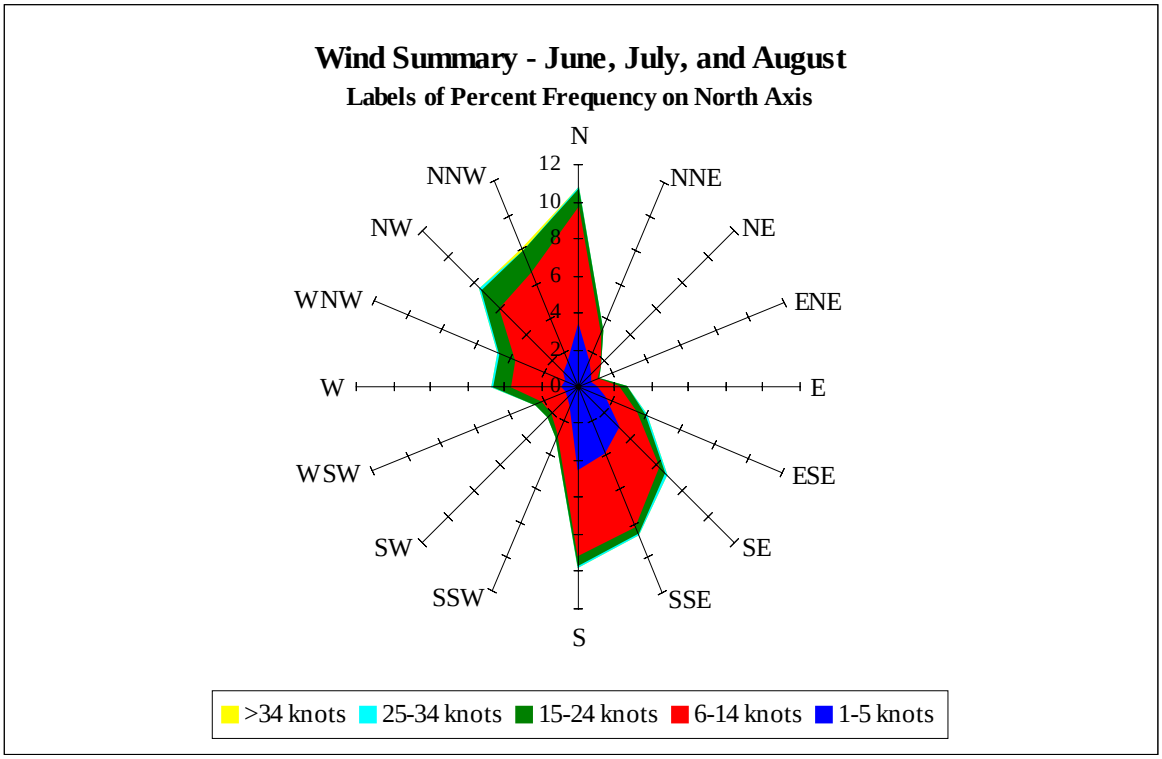
		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	27	58	71	60	30	43	77	96	95	75
	M.Cloudy	18	40	50	43	21	28	53	69	66	53
NORTH	M.Clear	7	12	13	12	8	18	14	15	16	14
	M.Cloudy	7	13	15	14	8	13	16	18	17	15
EAST	M.Clear	69	61	17	12	8	83	78	40	16	14
	M.Cloudy	28	35	17	14	8	39	48	32	17	15
SOUTH	M.Clear	33	73	90	76	39	10	34	55	55	33
	M.Cloudy	16	40	52	43	19	10	26	41	40	26
WEST	M.Clear	7	12	13	57	71	10	14	15	41	77
	M.Cloudy	7	13	15	35	32	10	16	18	32	49
M.Clear	(% hrs)	21	21	19	19	19	40	38	34	31	27
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	20	56	76	75	52	3	25	35	23	1
	M.Cloudy	12	36	52	50	35	3	16	23	16	1
NORTH	M.Clear	6	11	14	14	11	2	7	9	7	1
	M.Cloudy	5	12	16	15	12	1	7	9	7	1
EAST	M.Clear	63	75	37	14	11	16	38	9	7	1
	M.Cloudy	21	39	27	15	12	5	16	9	7	1
SOUTH	M.Clear	16	57	81	80	52	13	68	85	63	5
	M.Cloudy	8	32	49	47	30	4	25	36	25	2
WEST	M.Clear	6	11	14	43	76	2	7	11	39	6
	M.Cloudy	5	12	16	29	40	1	7	10	17	2
M.Clear	(% hrs)	46	44	43	42	43	18	21	20	21	22



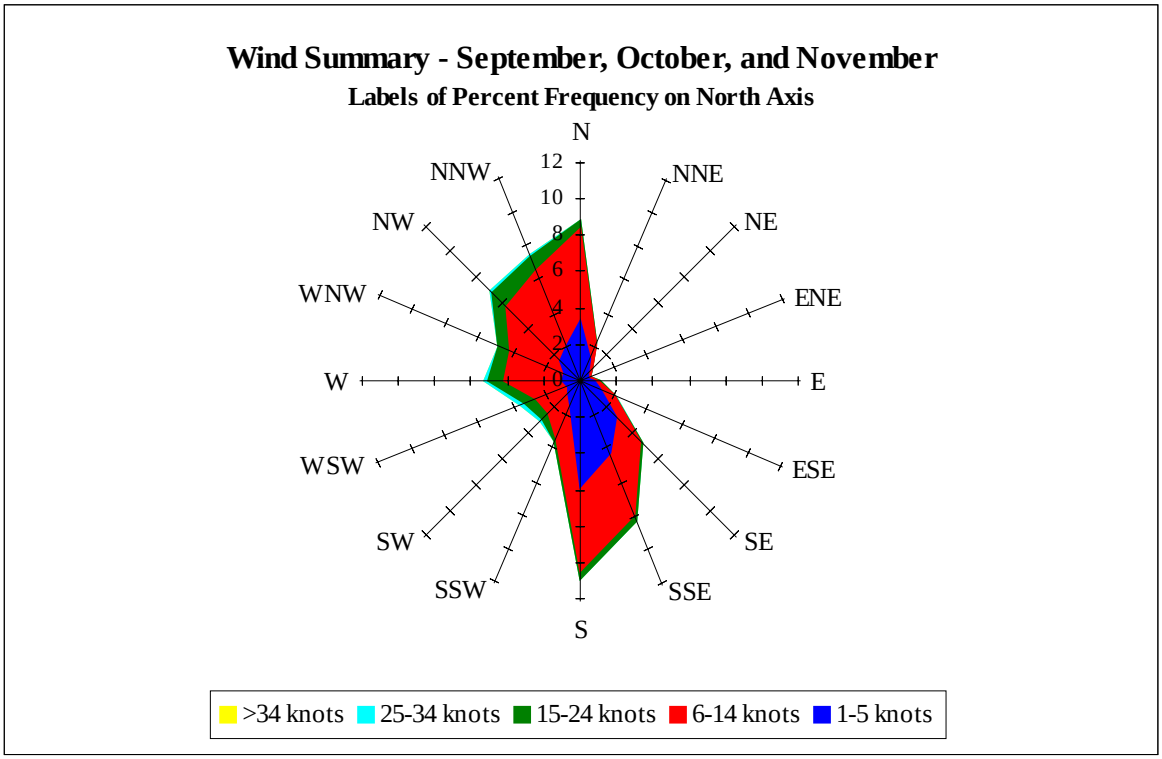
Percent Calm = 32.95



Percent Calm = 19.66



Percent Calm = 18.97



Percent Calm = 25.78