APPENDIX 3: STOCKING LEVEL TABLES (GRAND FIR SERIES)

This appendix provides suggested stocking levels in a series of tables grouped by plant association and forest series. Each of the 44 upland-forest associations has one to seven tables, depending on the number of tree species associated with it (table 2). The order of these tables follows the order used in table 2, both for the plant associations (the rows in table 2) and for the tree species (the columns of table 2). Note that the tables differ from the stocking-level figures in appendix 2 because they do not include any information about the full-stocking level; only the upper and lower limits of the management zone are described in this appendix.

Each table consists of 17 columns arranged in three sections. Two of the sections are also divided into subsections, as illustrated in the example below. Each section or subsection will be described individually.

Table 1: Stocking levels for subalpine fir in the ABLA2/TRCA3 plant association (full stocking = 382).

	UPPER MANAGEMENT ZONE (SDI = 287)								LOWER MANAGEMENT ZONE (SDI = 191)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	15323	14426	13340	1.8	84	79	73	72	10215	9618	8893	2.2	56	52	49	65
1.2	11178	10524	9731	2.1	88	83	76	73	7452	7016	6488	2.6	59	55	51	66
1.4	8561	8060	7453	2.4	92	86	80	73	5707	5374	4969	3.0	61	57	53	66
1.6	6795	6398	5916	2.7	95	89	83	74	4530	4265	3944	3.3	63	60	55	67
1.8	5543	5218	4825	3.0	98	92	85	75	3695	3479	3217	3.7	65	61	57	68
2.0	4619	4349	4021	3.3	101	95	88	75	3079	2899	2681	4.0	67	63	58	68
Section 1	**Subsection One**				**Subsection Two**				**Subsection One**				**Subsection Two**			
	Section Two								**Section Three**							

Section One: QMD. The first section is a single column providing quadratic mean diameters (QMDs) ranging from 1.0 to 10.0 inches in 0.2-inch increments, and from 10.5 to 30.0 inches in 0.5-inch increments (excluding 29.5 inches). Smaller increments were used for QMDs below 10 inches because the additional detail is useful when preparing silvicultural prescriptions for treatments such as precommercial thinning. If more detail is needed than is shown in the tables, intermediate values could be interpolated.

Section Two: ULMZ. The second section of each table, which consists of eight columns divided into two subsections, provides information about the upper limit of the management zone (ULMZ). The ULMZ can be thought of as a constant level of stand density index (SDI); the actual SDI level selected as an ULMZ is shown in the section heading, e.g., "Upper Management Zone (SDI = 287)." Refer to the "Derivation of the Stocking Level Information" section, page 15 (Upper Limit of the Management Zone), for information about how the SDI level was calculated for the ULMZ.

The first subsection of section two provides trees per acre calculations based on the SDI level established for the ULMZ, and the QMD given in column 1. The first column in this subsection provides the trees per acre associated with an even-aged stand structure, the next column provides it for an irregular structure, and the third column shows it for an uneven-aged stand. Note that the lodgepole pine tables do not include a trees per acre value for an uneven-aged stand because that structure is rare in primary lodgepole forest, and because establishment of an uneven-aged structure has not been a management objective for stands where lodgepole is the dominant or featured species.

The fourth column in subsection one shows the equilateral spacing associated with the trees per acre value for an even-aged stand structure. Spacing calculations were always based on even-aged stands because that structure presumably has the most consistent inter-tree distances; the equilateral spacing values shown in this column would not apply to trees left in clumps or in other irregular arrangements. Note that the lodgepole pine tables provide two measures of inter-tree distance – an equilateral spacing as described above, and a square spacing value that might be helpful when preparing silvicultural prescriptions for treatments in young lodgepole stands at very small QMDs. The square spacing calculation was also based on an even-aged stand structure.

Subsection two of section two provides basal area per acre calculations based on the SDI level established for the ULMZ, and the QMD given in column 1. As described above for subsection one (trees per acre), this subsection provides basal areas per acre for an even-aged, irregular, and uneven-aged structure (once again, an uneven-aged value was not calculated for lodgepole pine).

The fourth column in subsection two shows the forest (tree) canopy cover percentage associated with the basal area per acre for an even-aged or irregular stand structure. For Douglas-fir, ponderosa pine, Engelmann spruce, grand fir, and subalpine fir, canopy cover values pertain to an irregular structure because it best reflects the unmanaged stands that were sampled to derive the mathematical formulas used for the calculations. For lodgepole pine and western larch, canopy cover values pertain to even-aged stands because unmanaged stands tend to be even-aged for those species. Lodgepole pine has two canopy cover values – one pertaining to unmanaged stands, and another for managed stands (defined as those thinned early in life, before they attained a mean stand height of nine feet).

Section Three: LLMZ. The third section of each table, which consists of eight columns divided into two subsections, provides information about the lower limit of the management zone (LLMZ). The LLMZ can be thought of as a constant level of stand density index (SDI); the actual SDI level selected as a LLMZ is shown in the section heading, e.g., "Lower Management Zone (SDI = 191)." Refer to the "Derivation of the Stocking Level Information" section, page 16 (Lower Limit of the Management Zone), for information about how the SDI level was calculated for the LLMZ.

Subsection one of section three provides trees per acre calculations based on the SDI level established for the LLMZ, and the QMD given in column 1. As was described above for section two (ULMZ), this subsection provides trees per acre for an even-aged, irregular, and uneven-aged structure (once again, an uneven-aged value was not included in the lodgepole pine tables). The fourth column in this subsection shows the equilateral spacing associated with the trees per acre value for an even-aged stand structure.

Subsection two of section three provides basal area per acre calculations based on the SDI level established for the LLMZ, and the QMD given in column 1. As described above for subsection one (trees per acre), this subsection provides basal areas per acre for an even-aged, irregular, and uneven-aged structure (once again, an uneven-aged value was not calculated for lodgepole pine). The fourth column in this subsection shows the forest (tree) canopy cover associated with the basal area per acre for an even-aged or irregular stand structure, and was calculated as described above for section two.

Footnotes at the end of each table describe the column heading codes, and summarize how the calculations were made for each item. All of the calculations resulting in the figures in appendix 2, and the tables in appendix 3, were made in a computerized spreadsheet program. Calculation methodology followed the instructions from Cochran and others (1994) – see their appendix 2 (page 19) for more information. Further information about how the calculations were made for this publication can be obtained from the author. The information in this appendix could also be derived using a computer program called SDI. Refer to the "Customizing the Stocking-Level Information" section, page 30, for more information about the SDI program and how to obtain it.

Table 29: Stocking levels for grand fir in the ABGR/GYDR plant association (full stocking = 553).

	UPPER MANAGEMENT ZONE (SDI = 415)								LOWER MANAGEMENT ZONE (SDI = 277)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22242	20941	19364	1.5	121	114	106	80	14828	13961	12909	1.8	81	76	70	73
1.2	16225	15276	14126	1.8	127	120	111	81	10817	10184	9417	2.2	85	80	74	74
1.4	12427	11700	10819	2.0	133	125	116	82	8285	7800	7213	2.5	89	83	77	75
1.6	9864	9287	8587	2.3	138	130	120	82	6576	6191	5725	2.8	92	86	80	75
1.8	8046	7575	7004	2.5	142	134	124	83	5364	5050	4670	3.1	95	89	83	76
2.0	6705	6313	5837	2.7	146	138	127	84	4470	4208	3892	3.4	98	92	85	76
2.2	5686	5353	4950	3.0	150	141	131	84	3790	3569	3300	3.6	100	94	87	77
2.4	4891	4605	4258	3.2	154	145	134	84	3261	3070	2839	3.9	102	96	89	77
2.6	4259	4010	3708	3.4	157	148	137	85	2839	2673	2472	4.2	105	99	91	78
2.8	3746	3527	3261	3.7	160	151	139	85	2497	2351	2174	4.5	107	101	93	78
3.0	3325	3130	2894	3.9	163	154	142	86	2216	2087	1930	4.8	109	102	95	78
3.2	2973	2800	2589	4.1	166	156	145	86	1982	1866	1726	5.0	111	104	96	79
3.4	2677	2521	2331	4.3	169	159	147	86	1785	1681	1554	5.3	113	106	98	79
3.6	2425	2283	2111	4.6	171	161	149	86	1617	1522	1408	5.6	114	108	100	79
3.8	2209	2080	1923	4.8	174	164	151	87	1473	1386	1282	5.8	116	109	101	79
4.0	2021	1903	1760	5.0	176	166	154	87	1347	1269	1173	6.1	118	111	102	80
4.2	1858	1749	1617	5.2	179	168	156	87	1238	1166	1078	6.4	119	112	104	80
4.4	1714	1614	1492	5.4	181	170	158	87	1143	1076	995	6.6	121	114	105	80
4.6	1587	1494	1382	5.6	183	172	159	88	1058	996	921	6.9	122	115	106	80
4.8	1474	1388	1284	5.8	185	174	161	88	983	925	856	7.2	124	116	108	81
5.0	1374	1294	1196	6.1	187	176	163	88	916	862	797	7.4	125	118	109	81
5.2	1284	1209	1118	6.3	189	178	165	88	856	806	745	7.7	126	119	110	81
5.4	1203	1132	1047	6.5	191	180	167	88	802	755	698	7.9	128	120	111	81
5.6	1129	1063	983	6.7	193	182	168	89	753	709	655	8.2	129	121	112	81
5.8	1063	1001	925	6.9	195	184	170	89	709	667	617	8.4	130	122	113	81
6.0	1002	944	873	7.1	197	185	171	89	668	629	582	8.7	131	124	114	82
6.2	947	892	824	7.3	199	187	173	89	631	594	550	8.9	132	125	115	82
6.4	896	844	780	7.5	200	189	174	89	598	563	520	9.2	133	126	116	82
6.6	850	800	740	7.7	202	190	176	89	567	533	493	9.4	135	127	117	82
6.8	807	760	703	7.9	204	192	177	89	538	507	468	9.7	136	128	118	82
7.0	768	723	668	8.1	205	193	179	90	512	482	446	9.9	137	129	119	82
7.2	731	688	637	8.3	207	195	180	90	487	459	424	10.2	138	130	120	82
7.4	697	656	607	8.5	208	196	181	90	465	438	405	10.4	139	131	121	83
7.6	666	627	580	8.7	210	197	183	90	444	418	386	10.6	140	132	122	83
7.8	637	599	554	8.9	211	199	184	90	424	400	369	10.9	141	133	123	83
8.0	609	574	530	9.1	213	200	185	90	406	382	354	11.1	142	133	123	83
8.2	584	550	508	9.3	214	202	186	90	389	366	339	11.4	143	134	124	83
8.4	560	527	488	9.5	216	203	188	90	373	351	325	11.6	144	135	125	83
8.6	538	506	468	9.7	217	204	189	91	358	337	312	11.8	145	136	126	83
8.8	517	486	450	9.9	218	205	190	91	344	324	300	12.1	145	137	127	83
9.0	497	468	433	10.1	220	207	191	91	331	312	288	12.3	146	138	127	84
9.2	478	450	417	10.3	221	208	192	91	319	300	278	12.6	147	139	128	84
9.4	461	434	401	10.4	222	209	193	91	307	289	268	12.8	148	139	129	84
9.6	444	418	387	10.6	223	210	195	91	296	279	258	13.0	149	140	130	84
9.8	429	404	373	10.8	225	212	196	91	286	269	249	13.3	150	141	130	84
10.0	414	390	361	11.0	226	213	197	91	276	260	240	13.5	151	142	131	84
10.5	381	358	331	11.5	229	215	199	92	254	239	221	14.1	153	144	133	84

Table 29: Stocking levels for grand fir in the ABGR/GYDR plant association (full stocking = 553).

	UPPER MANAGEMENT ZONE (SDI = 415)								LOWER MANAGEMENT ZONE (SDI = 277)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	351	331	306	12.0	232	218	202	92	234	220	204	14.7	155	145	135	85
11.5	325	306	283	12.4	235	221	204	92	217	204	189	15.2	156	147	136	85
12.0	302	284	263	12.9	237	223	207	92	201	190	175	15.8	158	149	138	85
12.5	282	265	245	13.4	240	226	209	92	188	177	163	16.4	160	151	139	85
13.0	263	248	229	13.8	242	228	211	93	175	165	153	16.9	162	152	141	85
13.5	246	232	215	14.3	245	231	213	93	164	155	143	17.5	163	154	142	86
14.0	231	218	201	14.7	247	233	215	93	154	145	134	18.1	165	155	144	86
14.5	218	205	190	15.2	250	235	217	93	145	137	126	18.6	166	157	145	86
15.0	205	193	179	15.7	252	237	219	93	137	129	119	19.2	168	158	146	86
15.5	194	183	169	16.1	254	239	221	93	129	122	113	19.7	170	160	148	86
16.0	184	173	160	16.5	256	241	223	94	122	115	107	20.3	171	161	149	86
16.5	174	164	152	17.0	259	243	225	94	116	109	101	20.8	172	162	150	86
17.0	165	156	144	17.4	261	245	227	94	110	104	96	21.4	174	164	151	87
17.5	157	148	137	17.9	263	247	229	94	105	99	91	21.9	175	165	152	87
18.0	150	141	130	18.3	265	249	230	94	100	94	87	22.4	176	166	154	87
18.5	143	135	124	18.8	267	251	232	94	95	90	83	23.0	178	167	155	87
19.0	136	128	119	19.2	269	253	234	94	91	86	79	23.5	179	169	156	87
19.5	130	123	114	19.6	271	255	236	95	87	82	76	24.1	180	170	157	87
20.0	125	118	109	20.1	272	256	237	95	83	78	72	24.6	182	171	158	87
20.5	120	113	104	20.5	274	258	239	95	80	75	69	25.1	183	172	159	88
21.0	115	108	100	20.9	276	260	240	95	76	72	67	25.6	184	173	160	88
21.5	110	104	96	21.4	278	262	242	95	73	69	64	26.2	185	174	161	88
22.0	106	100	92	21.8	279	263	243	95	71	66	61	26.7	186	175	162	88
22.5	102	96	89	22.2	281	265	245	95	68	64	59	27.2	187	176	163	88
23.0	98	92	85	22.7	283	266	246	95	65	62	57	27.7	189	178	164	88
23.5	94	89	82	23.1	285	268	248	95	63	59	55	28.3	190	179	165	88
24.0	91	86	79	23.5	286	269	249	96	61	57	53	28.8	191	180	166	88
24.5	88	83	77	23.9	288	271	250	96	59	55	51	29.3	192	181	167	88
25.0	85	80	74	24.3	289	272	252	96	57	53	49	29.8	193	182	168	89
25.5	82	77	71	24.8	291	274	253	96	55	51	48	30.3	194	183	169	89
26.0	79	75	69	25.2	292	275	255	96	53	50	46	30.8	195	184	170	89
26.5	77	72	67	25.6	294	277	256	96	51	48	45	31.4	196	184	171	89
27.0	74	70	65	26.0	295	278	257	96	50	47	43	31.9	197	185	171	89
27.5	72	68	63	26.4	297	279	258	96	48	45	42	32.4	198	186	172	89
28.0	70	66	61	26.9	298	281	260	96	47	44	40	32.9	199	187	173	89
28.5	68	64	59	27.3	300	282	261	96	45	42	39	33.4	200	188	174	89
29.0	66	62	57	27.7	301	284	262	97	44	41	38	33.9	201	189	175	89
30.0	62	58	54	28.5	304	286	265	97	41	39	36	34.9	203	191	176	89

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 30: Stocking levels for western larch in the ABGR/POMU−ASCA3 plant association (full stocking = 350).

	UPPER MANAGEMENT ZONE (SDI = 263)								LOWER MANAGEMENT ZONE (SDI = 175)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14103	13278	12278	1.9	77	72	67	59	9402	8852	8185	2.3	51	48	45	52
1.2	10288	9686	8957	2.2	81	76	70	60	6859	6457	5971	2.7	54	51	47	52
1.4	7880	7419	6860	2.5	84	79	73	60	5253	4946	4573	3.1	56	53	49	53
1.6	6254	5888	5445	2.8	87	82	76	61	4170	3926	3630	3.5	58	55	51	54
1.8	5101	4803	4441	3.1	90	85	78	62	3401	3202	2961	3.8	60	57	52	54
2.0	4251	4003	3701	3.4	93	87	81	62	2834	2668	2467	4.2	62	58	54	55
2.2	3605	3394	3139	3.7	95	90	83	63	2403	2263	2092	4.6	63	60	55	55
2.4	3101	2920	2700	4.0	97	92	85	63	2068	1947	1800	4.9	65	61	57	56
2.6	2700	2542	2351	4.3	100	94	87	63	1800	1695	1567	5.3	66	62	58	56
2.8	2375	2236	2068	4.6	102	96	88	64	1584	1491	1379	5.6	68	64	59	56
3.0	2108	1985	1835	4.9	103	97	90	64	1405	1323	1224	6.0	69	65	60	57
3.2	1885	1775	1641	5.2	105	99	92	64	1257	1183	1094	6.3	70	66	61	57
3.4	1698	1598	1478	5.4	107	101	93	65	1132	1066	985	6.7	71	67	62	57
3.6	1538	1448	1339	5.7	109	102	95	65	1025	965	893	7.0	72	68	63	58
3.8	1401	1319	1219	6.0	110	104	96	65	934	879	813	7.3	74	69	64	58
4.0	1282	1207	1116	6.3	112	105	97	66	854	804	744	7.7	75	70	65	58
4.2	1178	1109	1025	6.5	113	107	99	66	785	739	684	8.0	76	71	66	58
4.4	1087	1023	946	6.8	115	108	100	66	725	682	631	8.3	77	72	67	59
4.6	1006	947	876	7.1	116	109	101	66	671	632	584	8.7	77	73	67	59
4.8	935	880	814	7.3	117	111	102	66	623	587	543	9.0	78	74	68	59
5.0	871	820	758	7.6	119	112	103	67	581	547	506	9.3	79	75	69	59
5.2	814	766	709	7.9	120	113	105	67	543	511	472	9.6	80	75	70	59
5.4	763	718	664	8.1	121	114	106	67	508	479	443	9.9	81	76	70	60
5.6	716	674	623	8.4	122	115	107	67	477	449	416	10.3	82	77	71	60
5.8	674	634	587	8.6	124	116	108	67	449	423	391	10.6	82	78	72	60
6.0	635	598	553	8.9	125	117	109	67	424	399	369	10.9	83	78	72	60
6.2	600	565	523	9.2	126	119	110	68	400	377	348	11.2	84	79	73	60
6.4	568	535	495	9.4	127	120	111	68	379	357	330	11.5	85	80	74	60
6.6	539	507	469	9.7	128	121	111	68	359	338	313	11.8	85	80	74	61
6.8	512	482	446	9.9	129	122	112	68	341	321	297	12.1	86	81	75	61
7.0	487	458	424	10.2	130	122	113	68	324	306	283	12.5	87	82	75	61
7.2	464	436	404	10.4	131	123	114	68	309	291	269	12.8	87	82	76	61
7.4	442	416	385	10.7	132	124	115	68	295	278	257	13.1	88	83	77	61
7.6	422	397	368	10.9	133	125	116	69	281	265	245	13.4	89	83	77	61
7.8	404	380	351	11.2	134	126	117	69	269	253	234	13.7	89	84	78	61
8.0	386	364	336	11.4	135	127	117	69	258	242	224	14.0	90	85	78	62
8.2	370	349	322	11.7	136	128	118	69	247	232	215	14.3	91	85	79	62
8.4	355	334	309	11.9	137	129	119	69	237	223	206	14.6	91	86	79	62
8.6	341	321	297	12.1	138	129	120	69	227	214	198	14.9	92	86	80	62
8.8	328	308	285	12.4	138	130	120	69	218	206	190	15.2	92	87	80	62
9.0	315	297	274	12.6	139	131	121	69	210	198	183	15.5	93	87	81	62
9.2	303	286	264	12.9	140	132	122	70	202	190	176	15.8	93	88	81	62
9.4	292	275	254	13.1	141	133	123	70	195	183	170	16.1	94	88	82	62
9.6	282	265	245	13.4	142	133	123	70	188	177	164	16.4	94	89	82	62
9.8	272	256	237	13.6	142	134	124	70	181	171	158	16.7	95	89	83	63
10.0	263	247	229	13.8	143	135	125	70	175	165	152	17.0	95	90	83	63
10.5	241	227	210	14.4	145	137	126	70	161	151	140	17.7	97	91	84	63

Table 30: Stocking levels for western larch in the ABGR/POMU−ASCA3 plant association (full stocking = 350).

	UPPER MANAGEMENT ZONE (SDI = 263)								LOWER MANAGEMENT ZONE (SDI = 175)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	223	210	194	15.0	147	138	128	70	148	140	129	18.4	98	92	85	63
11.5	206	194	180	15.6	149	140	129	71	137	129	120	19.1	99	93	86	63
12.0	192	180	167	16.2	150	142	131	71	128	120	111	19.8	100	94	87	64
12.5	179	168	155	16.8	152	143	132	71	119	112	104	20.6	101	95	88	64
13.0	167	157	145	17.4	154	145	134	71	111	105	97	21.3	102	97	89	64
13.5	156	147	136	17.9	155	146	135	71	104	98	91	22.0	104	97	90	64
14.0	147	138	128	18.5	157	148	137	72	98	92	85	22.7	105	98	91	64
14.5	138	130	120	19.1	158	149	138	72	92	87	80	23.4	106	99	92	64
15.0	130	123	113	19.7	160	150	139	72	87	82	76	24.1	107	100	93	65
15.5	123	116	107	20.2	161	152	140	72	82	77	71	24.8	107	101	94	65
16.0	116	110	101	20.8	163	153	142	72	78	73	68	25.5	108	102	94	65
16.5	110	104	96	21.3	164	154	143	72	74	69	64	26.1	109	103	95	65
17.0	105	99	91	21.9	165	156	144	73	70	66	61	26.8	110	104	96	65
17.5	100	94	87	22.5	167	157	145	73	66	63	58	27.5	111	105	97	65
18.0	95	89	83	23.0	168	158	146	73	63	60	55	28.2	112	105	97	66
18.5	91	85	79	23.6	169	159	147	73	60	57	53	28.9	113	106	98	66
19.0	87	81	75	24.1	170	160	148	73	58	54	50	29.5	114	107	99	66
19.5	83	78	72	24.7	172	161	149	73	55	52	48	30.2	114	108	100	66
20.0	79	75	69	25.2	173	163	150	73	53	50	46	30.9	115	108	100	66
20.5	76	71	66	25.8	174	164	151	73	51	48	44	31.5	116	109	101	66
21.0	73	69	63	26.3	175	165	152	74	49	46	42	32.2	117	110	102	66
21.5	70	66	61	26.8	176	166	153	74	47	44	41	32.9	117	111	102	66
22.0	67	63	58	27.4	177	167	154	74	45	42	39	33.5	118	111	103	66
22.5	65	61	56	27.9	178	168	155	74	43	41	37	34.2	119	112	103	67
23.0	62	59	54	28.4	179	169	156	74	41	39	36	34.8	120	113	104	67
23.5	60	56	52	29.0	180	170	157	74	40	38	35	35.5	120	113	105	67
24.0	58	54	50	29.5	181	171	158	74	38	36	34	36.1	121	114	105	67
24.5	56	52	49	30.0	182	172	159	74	37	35	32	36.8	122	115	106	67
25.0	54	51	47	30.6	183	173	160	74	36	34	31	37.4	122	115	106	67
25.5	52	49	45	31.1	184	174	161	75	35	33	30	38.1	123	116	107	67
26.0	50	47	44	31.6	185	175	161	75	34	32	29	38.7	124	116	108	67
26.5	49	46	42	32.2	186	175	162	75	32	31	28	39.4	124	117	108	67
27.0	47	44	41	32.7	187	176	163	75	31	30	27	40.0	125	118	109	67
27.5	46	43	40	33.2	188	177	164	75	30	29	26	40.7	125	118	109	68
28.0	44	42	39	33.7	189	178	165	75	29	28	26	41.3	126	119	110	68
28.5	43	40	37	34.2	190	179	165	75	29	27	25	41.9	127	119	110	68
29.0	42	39	36	34.8	191	180	166	75	28	26	24	42.6	127	120	111	68
30.0	39	37	34	35.8	193	181	168	75	26	25	23	43.8	128	121	112	68

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 31: Stocking levels for Engelmann spruce in the ABGR/POMU-ASCA3 plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	18813	17713	16379	1.6	103	97	89	75	12542	11808	10919	2.0	68	64	60	68
1.2	13724	12921	11948	1.9	108	101	94	76	9149	8614	7965	2.3	72	68	63	69
1.4	10511	9897	9151	2.2	112	106	98	77	7008	6598	6101	2.7	75	71	65	70
1.6	8343	7855	7264	2.5	116	110	101	78	5562	5237	4842	3.0	78	73	68	71
1.8	6805	6407	5925	2.7	120	113	105	78	4537	4271	3950	3.3	80	75	70	71
2.0	5671	5340	4937	3.0	124	116	108	79	3781	3560	3292	3.6	82	78	72	72
2.2	4809	4528	4187	3.2	127	120	111	79	3206	3019	2791	4.0	85	80	74	72
2.4	4137	3895	3602	3.5	130	122	113	80	2758	2597	2401	4.3	87	82	75	73
2.6	3602	3391	3136	3.7	133	125	116	80	2401	2261	2091	4.6	89	83	77	73
2.8	3169	2983	2759	4.0	135	128	118	80	2112	1989	1839	4.9	90	85	79	73
3.0	2812	2648	2448	4.2	138	130	120	81	1875	1765	1632	5.2	92	87	80	74
3.2	2515	2368	2190	4.5	140	132	122	81	1677	1579	1460	5.5	94	88	82	74
3.4	2265	2132	1972	4.7	143	134	124	81	1510	1421	1314	5.8	95	90	83	74
3.6	2051	1931	1786	5.0	145	137	126	82	1368	1288	1191	6.1	97	91	84	74
3.8	1868	1759	1627	5.2	147	139	128	82	1246	1173	1084	6.4	98	92	85	75
4.0	1710	1610	1488	5.4	149	140	130	82	1140	1073	992	6.6	99	94	87	75
4.2	1571	1479	1368	5.7	151	142	132	82	1047	986	912	6.9	101	95	88	75
4.4	1450	1365	1262	5.9	153	144	133	82	966	910	841	7.2	102	96	89	75
4.6	1342	1264	1169	6.1	155	146	135	83	895	843	779	7.5	103	97	90	76
4.8	1247	1174	1086	6.4	157	148	136	83	831	783	724	7.8	104	98	91	76
5.0	1162	1094	1012	6.6	158	149	138	83	775	729	674	8.1	106	99	92	76
5.2	1086	1022	945	6.8	160	151	139	83	724	682	630	8.3	107	101	93	76
5.4	1017	958	886	7.0	162	152	141	83	678	638	590	8.6	108	102	94	76
5.6	955	899	832	7.3	163	154	142	84	637	600	554	8.9	109	103	95	77
5.8	899	846	783	7.5	165	155	144	84	599	564	522	9.2	110	104	96	77
6.0	848	798	738	7.7	166	157	145	84	565	532	492	9.4	111	104	97	77
6.2	801	754	697	7.9	168	158	146	84	534	503	465	9.7	112	105	97	77
6.4	758	714	660	8.1	169	159	147	84	505	476	440	10.0	113	106	98	77
6.6	719	677	626	8.4	171	161	149	84	479	451	417	10.2	114	107	99	77
6.8	683	643	594	8.6	172	162	150	85	455	429	396	10.5	115	108	100	77
7.0	649	611	565	8.8	174	163	151	85	433	408	377	10.8	116	109	101	78
7.2	618	582	538	9.0	175	165	152	85	412	388	359	11.0	117	110	101	78
7.4	590	555	513	9.2	176	166	153	85	393	370	342	11.3	117	111	102	78
7.6	563	530	490	9.5	177	167	154	85	375	353	327	11.6	118	111	103	78
7.8	538	507	469	9.7	179	168	156	85	359	338	313	11.8	119	112	104	78
8.0	515	485	449	9.9	180	169	157	85	344	323	299	12.1	120	113	104	78
8.2	494	465	430	10.1	181	171	158	85	329	310	287	12.4	121	114	105	78
8.4	474	446	412	10.3	182	172	159	86	316	297	275	12.6	122	114	106	78
8.6	455	428	396	10.5	183	173	160	86	303	285	264	12.9	122	115	106	79
8.8	437	411	380	10.7	185	174	161	86	291	274	254	13.1	123	116	107	79
9.0	420	396	366	10.9	186	175	162	86	280	264	244	13.4	124	117	108	79
9.2	405	381	352	11.1	187	176	163	86	270	254	235	13.7	125	117	108	79
9.4	390	367	339	11.4	188	177	164	86	260	245	226	13.9	125	118	109	79
9.6	376	354	327	11.6	189	178	165	86	251	236	218	14.2	126	119	110	79
9.8	363	342	316	11.8	190	179	165	86	242	228	211	14.4	127	119	110	79
10.0	350	330	305	12.0	191	180	166	86	234	220	203	14.7	127	120	111	79
10.5	322	303	280	12.5	194	182	169	87	215	202	187	15.3	129	122	112	79

Table 31: Stocking levels for Engelmann spruce in the ABGR/POMU-ASCA3 plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	297	280	259	13.0	196	185	171	87	198	186	172	15.9	131	123	114	80
11.5	275	259	239	13.5	198	187	173	87	183	173	160	16.6	132	125	115	80
12.0	256	241	222	14.0	201	189	175	87	170	160	148	17.2	134	126	116	80
12.5	238	224	207	14.5	203	191	177	87	159	149	138	17.8	135	127	118	80
13.0	223	209	194	15.0	205	193	179	88	148	140	129	18.4	137	129	119	80
13.5	208	196	181	15.5	207	195	180	88	139	131	121	19.0	138	130	120	81
14.0	196	184	170	16.0	209	197	182	88	130	123	114	19.6	139	131	121	81
14.5	184	173	160	16.5	211	199	184	88	123	116	107	20.2	141	133	123	81
15.0	174	164	151	17.0	213	201	186	88	116	109	101	20.8	142	134	124	81
15.5	164	155	143	17.5	215	202	187	88	109	103	95	21.4	143	135	125	81
16.0	155	146	135	18.0	217	204	189	89	104	98	90	22.0	145	136	126	81
16.5	147	139	128	18.5	219	206	190	89	98	92	85	22.6	146	137	127	82
17.0	140	132	122	19.0	221	208	192	89	93	88	81	23.2	147	138	128	82
17.5	133	125	116	19.4	222	209	193	89	89	84	77	23.8	148	139	129	82
18.0	127	119	110	19.9	224	211	195	89	84	80	74	24.4	149	141	130	82
18.5	121	114	105	20.4	226	212	196	89	81	76	70	25.0	150	142	131	82
19.0	115	109	100	20.9	227	214	198	89	77	72	67	25.6	151	143	132	82
19.5	110	104	96	21.4	229	215	199	89	74	69	64	26.2	153	144	133	82
20.0	106	99	92	21.8	230	217	201	90	70	66	61	26.7	154	145	134	83
20.5	101	95	88	22.3	232	218	202	90	67	64	59	27.3	155	146	135	83
21.0	97	91	84	22.8	233	220	203	90	65	61	56	27.9	156	147	135	83
21.5	93	88	81	23.2	235	221	205	90	62	58	54	28.5	157	147	136	83
22.0	90	84	78	23.7	236	223	206	90	60	56	52	29.0	158	148	137	83
22.5	86	81	75	24.2	238	224	207	90	57	54	50	29.6	159	149	138	83
23.0	83	78	72	24.6	239	225	208	90	55	52	48	30.2	160	150	139	83
23.5	80	75	70	25.1	241	227	210	90	53	50	46	30.7	160	151	140	83
24.0	77	73	67	25.6	242	228	211	90	51	48	45	31.3	161	152	140	83
24.5	74	70	65	26.0	243	229	212	91	50	47	43	31.9	162	153	141	83
25.0	72	68	62	26.5	245	230	213	91	48	45	42	32.4	163	154	142	84
25.5	69	65	60	26.9	246	232	214	91	46	44	40	33.0	164	154	143	84
26.0	67	63	58	27.4	247	233	215	91	45	42	39	33.5	165	155	144	84
26.5	65	61	57	27.8	249	234	216	91	43	41	38	34.1	166	156	144	84
27.0	63	59	55	28.3	250	235	218	91	42	39	36	34.7	167	157	145	84
27.5	61	57	53	28.7	251	236	219	91	41	38	35	35.2	167	158	146	84
28.0	59	56	51	29.2	252	238	220	91	39	37	34	35.8	168	158	146	84
28.5	57	54	50	29.6	254	239	221	91	38	36	33	36.3	169	159	147	84
29.0	56	52	48	30.1	255	240	222	91	37	35	32	36.9	170	160	148	84
30.0	52	49	46	31.0	257	242	224	92	35	33	30	38.0	171	161	149	84

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 32: Stocking levels for grand fir in the ABGR/POMU−ASCA3 plant association (full stocking = 486).

	UPPER MANAGEMENT ZONE (SDI = 365)								LOWER MANAGEMENT ZONE (SDI = 243)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	19548	18405	17019	1.6	107	100	93	78	13032	12270	11346	2.0	71	67	62	71
1.2	14260	13426	12415	1.9	112	105	98	79	9507	8951	8277	2.3	75	70	65	72
1.4	10922	10283	9509	2.1	117	110	102	80	7281	6855	6339	2.6	78	73	68	72
1.6	8669	8162	7547	2.4	121	114	105	80	5779	5441	5032	3.0	81	76	70	73
1.8	7071	6657	6156	2.7	125	118	109	81	4714	4438	4104	3.3	83	78	73	73
2.0	5893	5548	5130	2.9	129	121	112	81	3929	3699	3420	3.6	86	81	75	74
2.2	4997	4705	4350	3.2	132	124	115	82	3331	3136	2900	3.9	88	83	77	74
2.4	4299	4047	3742	3.4	135	127	118	82	2866	2698	2495	4.2	90	85	78	75
2.6	3743	3524	3259	3.7	138	130	120	82	2495	2349	2172	4.5	92	87	80	75
2.8	3292	3100	2866	3.9	141	133	123	83	2195	2067	1911	4.8	94	88	82	76
3.0	2922	2751	2544	4.1	143	135	125	83	1948	1834	1696	5.1	96	90	83	76
3.2	2613	2460	2275	4.4	146	137	127	84	1742	1640	1517	5.4	97	92	85	76
3.4	2353	2215	2049	4.6	148	140	129	84	1569	1477	1366	5.7	99	93	86	77
3.6	2132	2007	1856	4.9	151	142	131	84	1421	1338	1237	5.9	100	95	87	77
3.8	1941	1828	1690	5.1	153	144	133	84	1294	1218	1127	6.2	102	96	89	77
4.0	1776	1672	1547	5.3	155	146	135	85	1184	1115	1031	6.5	103	97	90	77
4.2	1633	1537	1421	5.6	157	148	137	85	1088	1025	948	6.8	105	99	91	78
4.4	1506	1418	1311	5.8	159	150	138	85	1004	946	874	7.1	106	100	92	78
4.6	1395	1313	1214	6.0	161	152	140	85	930	876	810	7.4	107	101	93	78
4.8	1296	1220	1128	6.2	163	153	142	85	864	813	752	7.6	109	102	95	78
5.0	1208	1137	1051	6.5	165	155	143	86	805	758	701	7.9	110	103	96	78
5.2	1128	1062	982	6.7	166	157	145	86	752	708	655	8.2	111	104	97	79
5.4	1057	995	920	6.9	168	158	146	86	705	663	613	8.4	112	106	98	79
5.6	993	934	864	7.1	170	160	148	86	662	623	576	8.7	113	107	99	79
5.8	934	879	813	7.3	171	161	149	86	623	586	542	9.0	114	108	99	79
6.0	881	829	767	7.6	173	163	151	87	587	553	511	9.3	115	109	100	79
6.2	832	784	725	7.8	174	164	152	87	555	522	483	9.5	116	110	101	79
6.4	788	742	686	8.0	176	166	153	87	525	494	457	9.8	117	110	102	80
6.6	747	703	650	8.2	177	167	155	87	498	469	434	10.1	118	111	103	80
6.8	709	668	618	8.4	179	168	156	87	473	445	412	10.3	119	112	104	80
7.0	675	635	587	8.6	180	170	157	87	450	423	392	10.6	120	113	105	80
7.2	643	605	559	8.8	182	171	158	87	428	403	373	10.8	121	114	105	80
7.4	613	577	534	9.1	183	172	159	88	409	385	356	11.1	122	115	106	80
7.6	585	551	509	9.3	184	174	160	88	390	367	340	11.4	123	116	107	80
7.8	559	527	487	9.5	186	175	162	88	373	351	325	11.6	124	117	108	81
8.0	536	504	466	9.7	187	176	163	88	357	336	311	11.9	125	117	108	81
8.2	513	483	447	9.9	188	177	164	88	342	322	298	12.1	125	118	109	81
8.4	492	463	428	10.1	189	178	165	88	328	309	286	12.4	126	119	110	81
8.6	473	445	411	10.3	191	179	166	88	315	297	274	12.6	127	120	111	81
8.8	454	428	395	10.5	192	181	167	88	303	285	264	12.9	128	120	111	81
9.0	437	411	380	10.7	193	182	168	89	291	274	254	13.1	129	121	112	81
9.2	420	396	366	10.9	194	183	169	89	280	264	244	13.4	129	122	113	81
9.4	405	381	353	11.1	195	184	170	89	270	254	235	13.6	130	123	113	81
9.6	391	368	340	11.3	196	185	171	89	260	245	227	13.9	131	123	114	82
9.8	377	355	328	11.6	197	186	172	89	251	237	219	14.1	132	124	115	82
10.0	364	343	317	11.8	199	187	173	89	243	228	211	14.4	132	125	115	82
10.5	335	315	291	12.3	201	189	175	89	223	210	194	15.0	134	126	117	82

Table 32: Stocking levels for grand fir in the ABGR/POMU−ASCA3 plant association (full stocking = 486).

	UPPER MANAGEMENT ZONE (SDI = 365)								LOWER MANAGEMENT ZONE (SDI = 243)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	309	291	269	12.8	204	192	177	89	206	194	179	15.6	136	128	118	82
11.5	286	269	249	13.3	206	194	179	90	191	179	166	16.2	137	129	120	82
12.0	266	250	231	13.8	209	196	182	90	177	167	154	16.9	139	131	121	83
12.5	247	233	215	14.3	211	199	184	90	165	155	144	17.5	141	132	122	83
13.0	231	218	201	14.8	213	201	186	90	154	145	134	18.1	142	134	124	83
13.5	217	204	189	15.2	215	203	187	90	144	136	126	18.7	144	135	125	83
14.0	203	191	177	15.7	217	205	189	91	136	128	118	19.3	145	136	126	83
14.5	191	180	167	16.2	219	207	191	91	128	120	111	19.9	146	138	127	84
15.0	180	170	157	16.7	222	209	193	91	120	113	105	20.4	148	139	129	84
15.5	171	161	148	17.2	223	210	195	91	114	107	99	21.0	149	140	130	84
16.0	161	152	141	17.7	225	212	196	91	108	101	94	21.6	150	141	131	84
16.5	153	144	133	18.1	227	214	198	91	102	96	89	22.2	152	143	132	84
17.0	145	137	127	18.6	229	216	199	92	97	91	84	22.8	153	144	133	84
17.5	138	130	120	19.1	231	217	201	92	92	87	80	23.4	154	145	134	84
18.0	132	124	115	19.5	233	219	203	92	88	83	76	23.9	155	146	135	85
18.5	126	118	109	20.0	234	221	204	92	84	79	73	24.5	156	147	136	85
19.0	120	113	104	20.5	236	222	206	92	80	75	70	25.1	157	148	137	85
19.5	115	108	100	20.9	238	224	207	92	76	72	67	25.7	159	149	138	85
20.0	110	103	96	21.4	239	225	208	92	73	69	64	26.2	160	150	139	85
20.5	105	99	92	21.9	241	227	210	93	70	66	61	26.8	161	151	140	85
21.0	101	95	88	22.3	243	228	211	93	67	63	59	27.4	162	152	141	85
21.5	97	91	84	22.8	244	230	213	93	65	61	56	27.9	163	153	142	85
22.0	93	88	81	23.3	246	231	214	93	62	58	54	28.5	164	154	143	86
22.5	90	84	78	23.7	247	233	215	93	60	56	52	29.0	165	155	143	86
23.0	86	81	75	24.2	249	234	216	93	57	54	50	29.6	166	156	144	86
23.5	83	78	72	24.6	250	235	218	93	55	52	48	30.1	167	157	145	86
24.0	80	75	70	25.1	251	237	219	93	53	50	46	30.7	168	158	146	86
24.5	77	73	67	25.5	253	238	220	93	51	48	45	31.3	169	159	147	86
25.0	75	70	65	26.0	254	239	221	93	50	47	43	31.8	170	160	148	86
25.5	72	68	63	26.4	256	241	223	94	48	45	42	32.4	170	160	148	86
26.0	70	66	61	26.9	257	242	224	94	46	44	40	32.9	171	161	149	86
26.5	67	63	59	27.3	258	243	225	94	45	42	39	33.4	172	162	150	86
27.0	65	61	57	27.8	260	244	226	94	44	41	38	34.0	173	163	151	87
27.5	63	60	55	28.2	261	246	227	94	42	40	37	34.5	174	164	151	87
28.0	61	58	53	28.6	262	247	228	94	41	38	36	35.1	175	165	152	87
28.5	59	56	52	29.1	263	248	229	94	40	37	35	35.6	176	165	153	87
29.0	58	54	50	29.5	265	249	230	94	38	36	33	36.2	176	166	154	87
30.0	54	51	47	30.4	267	251	233	94	36	34	32	37.2	178	168	155	87

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 33: Stocking levels for western larch in the ABGR/TRCA3 plant association (full stocking = 398).

	UPPER MANAGEMENT ZONE (SDI = 299)								LOWER MANAGEMENT ZONE (SDI = 199)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16036	15098	13961	1.8	87	82	76	61	10691	10065	9307	2.2	58	55	51	54
1.2	11698	11014	10184	2.1	92	87	80	62	7799	7342	6789	2.5	61	58	53	55
1.4	8960	8435	7800	2.4	96	90	83	63	5973	5624	5200	2.9	64	60	56	55
1.6	7112	6696	6191	2.7	99	93	86	63	4741	4464	4128	3.3	66	62	58	56
1.8	5801	5461	5050	2.9	103	97	89	64	3867	3641	3367	3.6	68	64	59	57
2.0	4834	4551	4209	3.2	105	99	92	64	3223	3034	2806	4.0	70	66	61	57
2.2	4099	3859	3569	3.5	108	102	94	65	2733	2573	2379	4.3	72	68	63	58
2.4	3526	3320	3070	3.8	111	104	96	65	2351	2213	2047	4.6	74	70	64	58
2.6	3070	2891	2673	4.0	113	107	99	66	2047	1927	1782	5.0	75	71	66	58
2.8	2701	2543	2351	4.3	115	109	101	66	1801	1695	1568	5.3	77	72	67	59
3.0	2397	2257	2087	4.6	118	111	102	66	1598	1505	1391	5.6	78	74	68	59
3.2	2144	2018	1866	4.8	120	113	104	67	1429	1346	1244	5.9	80	75	69	59
3.4	1930	1817	1681	5.1	122	115	106	67	1287	1212	1120	6.3	81	76	71	60
3.6	1749	1646	1522	5.4	124	116	108	67	1166	1098	1015	6.6	82	78	72	60
3.8	1592	1499	1386	5.6	125	118	109	68	1062	1000	924	6.9	84	79	73	60
4.0	1457	1372	1269	5.9	127	120	111	68	971	915	846	7.2	85	80	74	61
4.2	1339	1261	1166	6.1	129	121	112	68	893	841	777	7.5	86	81	75	61
4.4	1236	1163	1076	6.4	130	123	114	68	824	776	717	7.8	87	82	76	61
4.6	1144	1077	996	6.6	132	124	115	68	763	718	664	8.1	88	83	77	61
4.8	1063	1001	925	6.9	134	126	116	69	709	667	617	8.4	89	84	78	61
5.0	991	933	862	7.1	135	127	118	69	660	622	575	8.7	90	85	78	62
5.2	926	871	806	7.4	137	129	119	69	617	581	537	9.0	91	86	79	62
5.4	867	816	755	7.6	138	130	120	69	578	544	503	9.3	92	87	80	62
5.6	814	767	709	7.9	139	131	121	69	543	511	473	9.6	93	87	81	62
5.8	766	721	667	8.1	141	132	122	70	511	481	445	9.9	94	88	82	62
6.0	723	680	629	8.3	142	134	124	70	482	454	419	10.2	95	89	82	62
6.2	683	643	594	8.6	143	135	125	70	455	429	396	10.5	95	90	83	63
6.4	646	608	563	8.8	144	136	126	70	431	406	375	10.8	96	91	84	63
6.6	613	577	533	9.1	146	137	127	70	408	385	356	11.1	97	91	84	63
6.8	582	548	507	9.3	147	138	128	70	388	365	338	11.4	98	92	85	63
7.0	553	521	482	9.5	148	139	129	71	369	347	321	11.7	99	93	86	63
7.2	527	496	459	9.8	149	140	130	71	351	331	306	12.0	99	94	87	63
7.4	503	473	438	10.0	150	141	131	71	335	316	292	12.3	100	94	87	64
7.6	480	452	418	10.2	151	142	132	71	320	301	279	12.5	101	95	88	64
7.8	459	432	400	10.5	152	143	133	71	306	288	266	12.8	102	96	88	64
8.0	439	414	382	10.7	153	144	133	71	293	276	255	13.1	102	96	89	64
8.2	421	396	366	10.9	154	145	134	71	281	264	244	13.4	103	97	90	64
8.4	404	380	351	11.2	155	146	135	71	269	253	234	13.7	104	98	90	64
8.6	388	365	337	11.4	156	147	136	72	258	243	225	14.0	104	98	91	64
8.8	373	351	324	11.6	157	148	137	72	248	234	216	14.2	105	99	91	64
9.0	358	337	312	11.8	158	149	138	72	239	225	208	14.5	106	99	92	64
9.2	345	325	300	12.1	159	150	139	72	230	217	200	14.8	106	100	92	65
9.4	332	313	289	12.3	160	151	139	72	222	209	193	15.1	107	101	93	65
9.6	320	302	279	12.5	161	152	140	72	214	201	186	15.3	107	101	93	65
9.8	309	291	269	12.8	162	153	141	72	206	194	179	15.6	108	102	94	65
10.0	299	281	260	13.0	163	153	142	72	199	187	173	15.9	109	102	95	65
10.5	274	258	239	13.5	165	155	144	73	183	172	159	16.6	110	104	96	65

Table 33: Stocking levels for western larch in the ABGR/TRCA3 plant association (full stocking = 398).

	UPPER MANAGEMENT ZONE (SDI = 299)								LOWER MANAGEMENT ZONE (SDI = 199)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	253	238	220	14.1	167	157	145	73	169	159	147	17.3	111	105	97	65
11.5	234	221	204	14.6	169	159	147	73	156	147	136	17.9	113	106	98	66
12.0	218	205	190	15.2	171	161	149	73	145	137	126	18.6	114	107	99	66
12.5	203	191	177	15.7	173	163	151	73	135	127	118	19.3	115	109	100	66
13.0	190	179	165	16.3	175	165	152	74	126	119	110	19.9	117	110	101	66
13.5	178	167	155	16.8	177	166	154	74	118	112	103	20.6	118	111	103	66
14.0	167	157	145	17.4	178	168	155	74	111	105	97	21.3	119	112	104	67
14.5	157	148	137	17.9	180	170	157	74	105	99	91	21.9	120	113	104	67
15.0	148	139	129	18.4	182	171	158	74	99	93	86	22.6	121	114	105	67
15.5	140	132	122	19.0	183	173	160	74	93	88	81	23.2	122	115	106	67
16.0	132	125	115	19.5	185	174	161	75	88	83	77	23.9	123	116	107	67
16.5	126	118	109	20.0	186	176	162	75	84	79	73	24.5	124	117	108	67
17.0	119	112	104	20.5	188	177	164	75	79	75	69	25.2	125	118	109	68
17.5	113	107	99	21.1	189	178	165	75	76	71	66	25.8	126	119	110	68
18.0	108	102	94	21.6	191	180	166	75	72	68	63	26.4	127	120	111	68
18.5	103	97	90	22.1	192	181	167	75	69	65	60	27.1	128	121	112	68
19.0	98	93	86	22.6	194	182	169	75	66	62	57	27.7	129	122	112	68
19.5	94	89	82	23.1	195	184	170	76	63	59	55	28.3	130	122	113	68
20.0	90	85	78	23.6	196	185	171	76	60	56	52	29.0	131	123	114	68
20.5	86	81	75	24.1	198	186	172	76	57	54	50	29.6	132	124	115	68
21.0	83	78	72	24.7	199	187	173	76	55	52	48	30.2	133	125	115	69
21.5	79	75	69	25.2	200	189	174	76	53	50	46	30.8	134	126	116	69
22.0	76	72	66	25.7	201	190	175	76	51	48	44	31.4	134	126	117	69
22.5	73	69	64	26.2	203	191	176	76	49	46	43	32.1	135	127	118	69
23.0	71	67	62	26.7	204	192	178	76	47	44	41	32.7	136	128	118	69
23.5	68	64	59	27.2	205	193	179	76	45	43	40	33.3	137	129	119	69
24.0	66	62	57	27.7	206	194	180	77	44	41	38	33.9	138	129	120	69
24.5	63	60	55	28.2	207	195	181	77	42	40	37	34.5	138	130	120	69
25.0	61	58	53	28.7	209	196	182	77	41	38	36	35.1	139	131	121	69
25.5	59	56	51	29.2	210	197	183	77	39	37	34	35.7	140	132	122	70
26.0	57	54	50	29.7	211	198	184	77	38	36	33	36.3	141	132	122	70
26.5	55	52	48	30.2	212	199	184	77	37	35	32	36.9	141	133	123	70
27.0	54	50	47	30.6	213	200	185	77	36	34	31	37.5	142	134	124	70
27.5	52	49	45	31.1	214	201	186	77	35	33	30	38.1	143	134	124	70
28.0	50	47	44	31.6	215	202	187	77	34	32	29	38.7	143	135	125	70
28.5	49	46	42	32.1	216	203	188	77	33	31	28	39.3	144	136	125	70
29.0	47	45	41	32.6	217	204	189	77	32	30	27	39.9	145	136	126	70
30.0	45	42	39	33.6	219	206	191	78	30	28	26	41.1	146	138	127	70

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 34: Stocking levels for Engelmann spruce in the ABGR/TRCA3 plant association (full stocking = 388).

	UPPER MANAGEMENT ZONE (SDI = 291)								LOWER MANAGEMENT ZONE (SDI = 194)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	15564	14654	13550	1.8	85	80	74	72	10376	9769	9033	2.2	57	53	49	65
1.2	11354	10690	9885	2.1	89	84	78	73	7569	7126	6590	2.6	59	56	52	66
1.4	8696	8187	7571	2.4	93	88	81	74	5797	5458	5047	2.9	62	58	54	67
1.6	6902	6499	6009	2.7	96	91	84	74	4602	4332	4006	3.3	64	60	56	67
1.8	5630	5301	4901	3.0	99	94	87	75	3753	3534	3268	3.7	66	62	58	68
2.0	4692	4417	4085	3.3	102	96	89	75	3128	2945	2723	4.0	68	64	59	68
2.2	3979	3746	3464	3.6	105	99	91	76	2652	2497	2309	4.4	70	66	61	69
2.4	3423	3222	2980	3.8	108	101	94	76	2282	2148	1987	4.7	72	67	62	69
2.6	2980	2806	2594	4.1	110	103	96	77	1987	1870	1730	5.0	73	69	64	70
2.8	2621	2468	2282	4.4	112	106	98	77	1748	1645	1521	5.4	75	70	65	70
3.0	2327	2190	2025	4.6	114	108	99	77	1551	1460	1350	5.7	76	72	66	70
3.2	2081	1959	1811	4.9	116	109	101	78	1387	1306	1208	6.0	77	73	67	71
3.4	1874	1764	1631	5.2	118	111	103	78	1249	1176	1087	6.3	79	74	69	71
3.6	1697	1598	1478	5.4	120	113	104	78	1131	1065	985	6.7	80	75	70	71
3.8	1546	1455	1346	5.7	122	115	106	78	1030	970	897	7.0	81	76	71	71
4.0	1414	1332	1231	6.0	123	116	107	79	943	888	821	7.3	82	77	72	72
4.2	1300	1224	1132	6.2	125	118	109	79	867	816	754	7.6	83	78	73	72
4.4	1199	1129	1044	6.5	127	119	110	79	800	753	696	7.9	84	79	74	72
4.6	1111	1046	967	6.7	128	121	112	79	740	697	645	8.2	85	80	74	72
4.8	1032	971	898	7.0	130	122	113	80	688	648	599	8.6	86	81	75	73
5.0	961	905	837	7.2	131	123	114	80	641	603	558	8.9	87	82	76	73
5.2	898	846	782	7.5	132	125	115	80	599	564	521	9.2	88	83	77	73
5.4	842	792	733	7.7	134	126	117	80	561	528	488	9.5	89	84	78	73
5.6	790	744	688	8.0	135	127	118	80	527	496	459	9.8	90	85	78	73
5.8	744	700	647	8.2	136	128	119	80	496	467	432	10.1	91	86	79	73
6.0	701	660	611	8.5	138	130	120	81	468	440	407	10.4	92	86	80	74
6.2	663	624	577	8.7	139	131	121	81	442	416	385	10.7	93	87	81	74
6.4	627	591	546	9.0	140	132	122	81	418	394	364	11.0	93	88	81	74
6.6	595	560	518	9.2	141	133	123	81	396	373	345	11.3	94	89	82	74
6.8	565	532	492	9.4	142	134	124	81	377	354	328	11.6	95	89	83	74
7.0	537	506	468	9.7	144	135	125	81	358	337	312	11.9	96	90	83	74
7.2	512	482	445	9.9	145	136	126	81	341	321	297	12.1	96	91	84	74
7.4	488	459	425	10.2	146	137	127	82	325	306	283	12.4	97	91	85	75
7.6	466	439	406	10.4	147	138	128	82	311	292	270	12.7	98	92	85	75
7.8	445	419	388	10.6	148	139	129	82	297	280	259	13.0	99	93	86	75
8.0	426	401	371	10.9	149	140	130	82	284	268	247	13.3	99	93	86	75
8.2	409	385	356	11.1	150	141	130	82	272	256	237	13.6	100	94	87	75
8.4	392	369	341	11.3	151	142	131	82	261	246	227	13.9	101	95	88	75
8.6	376	354	328	11.6	152	143	132	82	251	236	218	14.2	101	95	88	75
8.8	362	340	315	11.8	153	144	133	82	241	227	210	14.4	102	96	89	75
9.0	348	327	303	12.0	154	145	134	83	232	218	202	14.7	102	96	89	75
9.2	335	315	291	12.3	155	146	135	83	223	210	194	15.0	103	97	90	76
9.4	323	304	281	12.5	155	146	135	83	215	202	187	15.3	104	98	90	76
9.6	311	293	271	12.7	156	147	136	83	207	195	181	15.6	104	98	91	76
9.8	300	283	261	12.9	157	148	137	83	200	188	174	15.9	105	99	91	76
10.0	290	273	252	13.2	158	149	138	83	193	182	168	16.1	105	99	92	76
10.5	266	251	232	13.7	160	151	139	83	178	167	155	16.8	107	101	93	76

Table 34: Stocking levels for Engelmann spruce in the ABGR/TRCA3 plant association (full stocking = 388).

	UPPER MANAGEMENT ZONE (SDI = 291)								LOWER MANAGEMENT ZONE (SDI = 194)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	246	231	214	14.3	162	153	141	83	164	154	143	17.5	108	102	94	76
11.5	228	214	198	14.9	164	155	143	84	152	143	132	18.2	109	103	95	77
12.0	211	199	184	15.4	166	156	145	84	141	133	123	18.9	111	104	96	77
12.5	197	185	172	16.0	168	158	146	84	131	124	114	19.6	112	105	97	77
13.0	184	173	160	16.5	170	160	148	84	123	116	107	20.2	113	106	98	77
13.5	172	162	150	17.1	171	161	149	84	115	108	100	20.9	114	108	99	77
14.0	162	152	141	17.6	173	163	151	85	108	102	94	21.6	115	109	100	78
14.5	152	143	133	18.2	175	165	152	85	102	96	88	22.3	117	110	101	78
15.0	144	135	125	18.7	176	166	154	85	96	90	83	22.9	118	111	102	78
15.5	136	128	118	19.2	178	168	155	85	91	85	79	23.6	119	112	103	78
16.0	129	121	112	19.8	179	169	156	85	86	81	75	24.2	120	113	104	78
16.5	122	115	106	20.3	181	170	158	85	81	76	71	24.9	121	114	105	78
17.0	116	109	101	20.8	182	172	159	86	77	73	67	25.5	122	114	106	78
17.5	110	104	96	21.4	184	173	160	86	73	69	64	26.2	123	115	107	79
18.0	105	99	91	21.9	185	174	161	86	70	66	61	26.8	124	116	108	79
18.5	100	94	87	22.4	187	176	162	86	67	63	58	27.5	124	117	108	79
19.0	95	90	83	23.0	188	177	164	86	64	60	55	28.1	125	118	109	79
19.5	91	86	79	23.5	189	178	165	86	61	57	53	28.8	126	119	110	79
20.0	87	82	76	24.0	191	179	166	86	58	55	51	29.4	127	120	111	79
20.5	84	79	73	24.5	192	181	167	86	56	53	49	30.0	128	120	111	79
21.0	80	76	70	25.0	193	182	168	87	54	50	47	30.7	129	121	112	79
21.5	77	73	67	25.5	194	183	169	87	51	48	45	31.3	130	122	113	80
22.0	74	70	64	26.1	196	184	170	87	49	47	43	31.9	130	123	114	80
22.5	71	67	62	26.6	197	185	171	87	48	45	41	32.5	131	124	114	80
23.0	69	65	60	27.1	198	186	172	87	46	43	40	33.2	132	124	115	80
23.5	66	62	58	27.6	199	187	173	87	44	41	38	33.8	133	125	116	80
24.0	64	60	55	28.1	200	189	174	87	42	40	37	34.4	133	126	116	80
24.5	61	58	54	28.6	201	190	175	87	41	39	36	35.0	134	126	117	80
25.0	59	56	52	29.1	202	191	176	87	40	37	34	35.6	135	127	117	80
25.5	57	54	50	29.6	204	192	177	87	38	36	33	36.3	136	128	118	80
26.0	55	52	48	30.1	205	193	178	88	37	35	32	36.9	136	128	119	80
26.5	54	51	47	30.6	206	194	179	88	36	34	31	37.5	137	129	119	81
27.0	52	49	45	31.1	207	195	180	88	35	33	30	38.1	138	130	120	81
27.5	50	47	44	31.6	208	196	181	88	34	32	29	38.7	138	130	121	81
28.0	49	46	42	32.1	209	197	182	88	33	31	28	39.3	139	131	121	81
28.5	47	45	41	32.6	210	197	183	88	32	30	27	39.9	140	132	122	81
29.0	46	43	40	33.1	211	198	183	88	31	29	27	40.5	140	132	122	81
30.0	43	41	38	34.1	213	200	185	88	29	27	25	41.7	142	133	123	81

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 35: Stocking levels for grand fir in the ABGR/TRCA3 plant association (full stocking = 554).

	UPPER MANAGEMENT ZONE (SDI = 416)								LOWER MANAGEMENT ZONE (SDI = 277)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22283	20979	19399	1.5	122	114	106	80	14855	13986	12933	1.8	81	76	71	73
1.2	16255	15304	14151	1.8	128	120	111	81	10837	10203	9434	2.2	85	80	74	74
1.4	12450	11722	10839	2.0	133	125	116	82	8300	7814	7226	2.5	89	84	77	75
1.6	9882	9304	8603	2.3	138	130	120	82	6588	6203	5735	2.8	92	87	80	75
1.8	8060	7589	7017	2.5	142	134	124	83	5373	5059	4678	3.1	95	89	83	76
2.0	6717	6324	5848	2.7	147	138	128	84	4478	4216	3899	3.4	98	92	85	76
2.2	5696	5363	4959	3.0	150	142	131	84	3797	3575	3306	3.6	100	94	87	77
2.4	4900	4613	4266	3.2	154	145	134	84	3267	3076	2844	3.9	103	97	89	77
2.6	4266	4017	3714	3.4	157	148	137	85	2844	2678	2476	4.2	105	99	91	78
2.8	3753	3533	3267	3.7	160	151	140	85	2502	2356	2178	4.5	107	101	93	78
3.0	3331	3136	2900	3.9	163	154	142	86	2221	2091	1933	4.8	109	103	95	78
3.2	2979	2805	2593	4.1	166	157	145	86	1986	1870	1729	5.0	111	104	97	79
3.4	2682	2525	2335	4.3	169	159	147	86	1788	1684	1557	5.3	113	106	98	79
3.6	2430	2288	2115	4.5	172	162	150	86	1620	1525	1410	5.6	114	108	100	79
3.8	2213	2083	1926	4.8	174	164	152	87	1475	1389	1284	5.8	116	109	101	79
4.0	2025	1906	1763	5.0	177	166	154	87	1350	1271	1175	6.1	118	111	103	80
4.2	1861	1752	1620	5.2	179	169	156	87	1241	1168	1080	6.4	119	112	104	80
4.4	1717	1617	1495	5.4	181	171	158	87	1145	1078	997	6.6	121	114	105	80
4.6	1590	1497	1384	5.6	184	173	160	88	1060	998	923	6.9	122	115	107	80
4.8	1477	1391	1286	5.8	186	175	162	88	985	927	857	7.1	124	117	108	81
5.0	1376	1296	1198	6.0	188	177	163	88	918	864	799	7.4	125	118	109	81
5.2	1286	1211	1120	6.3	190	179	165	88	857	807	746	7.7	126	119	110	81
5.4	1205	1134	1049	6.5	192	180	167	88	803	756	699	7.9	128	120	111	81
5.6	1131	1065	985	6.7	194	182	168	89	754	710	657	8.2	129	121	112	81
5.8	1065	1002	927	6.9	195	184	170	89	710	668	618	8.4	130	123	113	81
6.0	1004	945	874	7.1	197	186	172	89	669	630	583	8.7	131	124	114	82
6.2	949	893	826	7.3	199	187	173	89	632	595	551	8.9	133	125	115	82
6.4	898	845	782	7.5	201	189	175	89	599	564	521	9.2	134	126	116	82
6.6	851	802	741	7.7	202	190	176	89	568	534	494	9.4	135	127	117	82
6.8	809	761	704	7.9	204	192	178	90	539	508	469	9.7	136	128	118	82
7.0	769	724	670	8.1	206	194	179	90	513	483	446	9.9	137	129	119	82
7.2	732	690	638	8.3	207	195	180	90	488	460	425	10.1	138	130	120	83
7.4	699	658	608	8.5	209	196	182	90	466	438	405	10.4	139	131	121	83
7.6	667	628	581	8.7	210	198	183	90	445	419	387	10.6	140	132	122	83
7.8	638	600	555	8.9	212	199	184	90	425	400	370	10.9	141	133	123	83
8.0	610	575	531	9.1	213	201	186	90	407	383	354	11.1	142	134	124	83
8.2	585	551	509	9.3	214	202	187	90	390	367	339	11.4	143	135	124	83
8.4	561	528	488	9.5	216	203	188	91	374	352	326	11.6	144	136	125	83
8.6	539	507	469	9.7	217	205	189	91	359	338	313	11.8	145	136	126	83
8.8	518	487	451	9.9	219	206	190	91	345	325	300	12.1	146	137	127	83
9.0	498	469	433	10.1	220	207	191	91	332	313	289	12.3	147	138	128	84
9.2	479	451	417	10.2	221	208	193	91	320	301	278	12.5	148	139	128	84
9.4	462	435	402	10.4	223	210	194	91	308	290	268	12.8	148	140	129	84
9.6	445	419	388	10.6	224	211	195	91	297	279	258	13.0	149	140	130	84
9.8	430	405	374	10.8	225	212	196	91	286	270	249	13.3	150	141	131	84
10.0	415	391	361	11.0	226	213	197	91	277	260	241	13.5	151	142	131	84
10.5	381	359	332	11.5	229	216	200	92	254	239	221	14.1	153	144	133	84
11.0	352	331	306	12.0	232	219	202	92	235	221	204	14.6	155	146	135	85

Table 35: Stocking levels for grand fir in the ABGR/TRCA3 plant association (full stocking = 554).

	UPPER MANAGEMENT ZONE (SDI = 416)								LOWER MANAGEMENT ZONE (SDI = 277)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	326	307	284	12.4	235	221	205	92	217	204	189	15.2	157	148	136	85
12.0	303	285	264	12.9	238	224	207	92	202	190	176	15.8	158	149	138	85
12.5	282	266	246	13.4	240	226	209	92	188	177	164	16.4	160	151	140	85
13.0	264	248	229	13.8	243	229	211	93	176	165	153	16.9	162	152	141	85
13.5	247	232	215	14.3	245	231	214	93	165	155	143	17.5	164	154	142	86
14.0	232	218	202	14.7	248	233	216	93	155	146	135	18.0	165	156	144	86
14.5	218	205	190	15.2	250	236	218	93	145	137	127	18.6	167	157	145	86
15.0	206	194	179	15.6	252	238	220	93	137	129	119	19.1	168	158	147	86
15.5	194	183	169	16.1	255	240	222	94	130	122	113	19.7	170	160	148	86
16.0	184	173	160	16.5	257	242	224	94	123	115	107	20.2	171	161	149	86
16.5	174	164	152	17.0	259	244	226	94	116	110	101	20.8	173	163	150	87
17.0	166	156	144	17.4	261	246	227	94	110	104	96	21.3	174	164	152	87
17.5	158	148	137	17.9	263	248	229	94	105	99	91	21.9	175	165	153	87
18.0	150	141	131	18.3	265	250	231	94	100	94	87	22.4	177	166	154	87
18.5	143	135	125	18.7	267	252	233	94	95	90	83	23.0	178	168	155	87
19.0	137	129	119	19.2	269	253	234	94	91	86	79	23.5	179	169	156	87
19.5	131	123	114	19.6	271	255	236	95	87	82	76	24.0	181	170	157	87
20.0	125	118	109	20.1	273	257	238	95	83	79	73	24.6	182	171	158	87
20.5	120	113	104	20.5	275	259	239	95	80	75	70	25.1	183	172	159	88
21.0	115	108	100	20.9	276	260	241	95	77	72	67	25.6	184	174	160	88
21.5	110	104	96	21.3	278	262	242	95	74	69	64	26.1	186	175	162	88
22.0	106	100	92	21.8	280	264	244	95	71	67	62	26.7	187	176	163	88
22.5	102	96	89	22.2	282	265	245	95	68	64	59	27.2	188	177	163	88
23.0	98	92	86	22.6	283	267	247	95	65	62	57	27.7	189	178	164	88
23.5	95	89	82	23.1	285	268	248	96	63	59	55	28.2	190	179	165	88
24.0	91	86	79	23.5	287	270	250	96	61	57	53	28.8	191	180	166	88
24.5	88	83	77	23.9	288	271	251	96	59	55	51	29.3	192	181	167	88
25.0	85	80	74	24.3	290	273	252	96	57	53	49	29.8	193	182	168	89
25.5	82	77	72	24.7	291	274	254	96	55	52	48	30.3	194	183	169	89
26.0	79	75	69	25.2	293	276	255	96	53	50	46	30.8	195	184	170	89
26.5	77	72	67	25.6	294	277	256	96	51	48	45	31.3	196	185	171	89
27.0	74	70	65	26.0	296	279	258	96	50	47	43	31.8	197	186	172	89
27.5	72	68	63	26.4	297	280	259	96	48	45	42	32.3	198	187	173	89
28.0	70	66	61	26.8	299	281	260	96	47	44	41	32.9	199	188	173	89
28.5	68	64	59	27.2	300	283	261	96	45	43	39	33.4	200	188	174	89
29.0	66	62	57	27.7	302	284	263	97	44	41	38	33.9	201	189	175	89
30.0	62	58	54	28.5	304	287	265	97	41	39	36	34.9	203	191	177	89

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 36: Stocking levels for Douglas-fir in the ABGR/ACGL plant association (full stocking = 241).

	UPPER MANAGEMENT ZONE (SDI = 181)								LOWER MANAGEMENT ZONE (SDI = 121)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	5866	5523	5107	2.9	32	30	28	54	3911	3682	3405	3.6	21	20	19	48
1.2	4454	4194	3878	3.4	35	33	30	56	2970	2796	2585	4.1	23	22	20	50
1.4	3529	3323	3073	3.8	38	36	33	57	2353	2215	2048	4.6	25	24	22	51
1.6	2885	2716	2512	4.2	40	38	35	58	1923	1811	1674	5.1	27	25	23	52
1.8	2415	2274	2102	4.6	43	40	37	59	1610	1516	1402	5.6	28	27	25	53
2.0	2060	1939	1793	4.9	45	42	39	60	1373	1293	1195	6.1	30	28	26	53
2.2	1784	1679	1553	5.3	47	44	41	61	1189	1119	1035	6.5	31	30	27	54
2.4	1564	1472	1362	5.7	49	46	43	61	1043	982	908	6.9	33	31	29	55
2.6	1386	1305	1207	6.0	51	48	44	62	924	870	804	7.4	34	32	30	55
2.8	1239	1167	1079	6.4	53	50	46	62	826	778	719	7.8	35	33	31	56
3.0	1117	1051	972	6.7	55	52	48	63	744	701	648	8.2	37	34	32	57
3.2	1013	954	882	7.0	57	53	49	63	675	636	588	8.6	38	36	33	57
3.4	924	870	805	7.4	58	55	51	64	616	580	536	9.0	39	37	34	58
3.6	848	798	738	7.7	60	56	52	64	565	532	492	9.4	40	38	35	58
3.8	781	736	680	8.0	62	58	54	65	521	490	454	9.8	41	39	36	58
4.0	723	681	630	8.3	63	59	55	65	482	454	420	10.2	42	40	37	59
4.2	672	632	585	8.7	65	61	56	66	448	422	390	10.6	43	41	38	59
4.4	626	590	545	9.0	66	62	58	66	417	393	363	11.0	44	42	38	60
4.6	586	551	510	9.3	68	64	59	66	390	368	340	11.4	45	42	39	60
4.8	549	517	478	9.6	69	65	60	67	366	345	319	11.7	46	43	40	60
5.0	516	486	449	9.9	70	66	61	67	344	324	300	12.1	47	44	41	61
5.2	487	458	424	10.2	72	68	62	67	324	305	282	12.5	48	45	42	61
5.4	460	433	400	10.5	73	69	64	68	306	289	267	12.8	49	46	42	61
5.6	435	410	379	10.8	74	70	65	68	290	273	253	13.2	50	47	43	61
5.8	413	388	359	11.0	76	71	66	68	275	259	239	13.5	50	48	44	62
6.0	392	369	341	11.3	77	72	67	68	261	246	228	13.9	51	48	45	62
6.2	373	351	325	11.6	78	74	68	69	249	234	217	14.2	52	49	45	62
6.4	356	335	310	11.9	79	75	69	69	237	223	206	14.6	53	50	46	62
6.6	339	320	296	12.2	81	76	70	69	226	213	197	14.9	54	51	47	63
6.8	325	306	283	12.4	82	77	71	69	216	204	188	15.2	55	51	48	63
7.0	311	292	270	12.7	83	78	72	70	207	195	180	15.6	55	52	48	63
7.2	298	280	259	13.0	84	79	73	70	198	187	173	15.9	56	53	49	63
7.4	286	269	249	13.3	85	80	74	70	190	179	166	16.3	57	54	50	64
7.6	274	258	239	13.5	86	81	75	70	183	172	159	16.6	58	54	50	64
7.8	264	248	230	13.8	88	82	76	70	176	166	153	16.9	58	55	51	64
8.0	254	239	221	14.1	89	83	77	71	169	159	147	17.2	59	56	51	64
8.2	245	230	213	14.3	90	84	78	71	163	154	142	17.6	60	56	52	64
8.4	236	222	205	14.6	91	85	79	71	157	148	137	17.9	61	57	53	65
8.6	228	214	198	14.9	92	86	80	71	152	143	132	18.2	61	58	53	65
8.8	220	207	191	15.1	93	87	81	71	147	138	128	18.5	62	58	54	65
9.0	213	200	185	15.4	94	88	82	72	142	133	123	18.8	63	59	54	65
9.2	206	194	179	15.6	95	89	83	72	137	129	119	19.2	63	60	55	65
9.4	199	187	173	15.9	96	90	84	72	133	125	116	19.5	64	60	56	65
9.6	193	182	168	16.2	97	91	84	72	129	121	112	19.8	65	61	56	66
9.8	187	176	163	16.4	98	92	85	72	125	117	108	20.1	65	61	57	66
10.0	181	171	158	16.7	99	93	86	72	121	114	105	20.4	66	62	57	66
10.5	168	159	147	17.3	101	95	88	73	112	106	98	21.2	68	64	59	66

Table 36: Stocking levels for Douglas-fir in the ABGR/ACGL plant association (full stocking = 241).

	UPPER MANAGEMENT ZONE (SDI = 181)								LOWER MANAGEMENT ZONE (SDI = 121)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	157	148	137	17.9	104	98	90	73	105	99	91	21.9	69	65	60	67
11.5	147	138	128	18.5	106	100	92	74	98	92	85	22.7	71	66	61	67
12.0	138	130	120	19.1	108	102	94	74	92	86	80	23.4	72	68	63	67
12.5	129	122	113	19.7	110	104	96	74	86	81	75	24.1	74	69	64	68
13.0	122	115	106	20.3	112	106	98	74	81	77	71	24.9	75	71	65	68
13.5	115	108	100	20.9	115	108	100	75	77	72	67	25.6	76	72	66	68
14.0	109	103	95	21.5	117	110	102	75	73	68	63	26.3	78	73	68	69
14.5	103	97	90	22.1	119	112	103	75	69	65	60	27.0	79	74	69	69
15.0	98	93	86	22.6	121	114	105	76	66	62	57	27.7	80	76	70	69
15.5	94	88	81	23.2	123	115	107	76	62	59	54	28.4	82	77	71	69
16.0	89	84	78	23.8	124	117	108	76	59	56	52	29.1	83	78	72	70
16.5	85	80	74	24.3	126	119	110	76	57	53	49	29.8	84	79	73	70
17.0	81	77	71	24.9	128	121	112	77	54	51	47	30.5	85	80	74	70
17.5	78	73	68	25.4	130	122	113	77	52	49	45	31.1	87	82	75	70
18.0	75	70	65	26.0	132	124	115	77	50	47	43	31.8	88	83	77	71
18.5	72	67	62	26.5	134	126	116	77	48	45	42	32.5	89	84	78	71
19.0	69	65	60	27.0	135	127	118	77	46	43	40	33.1	90	85	79	71
19.5	66	62	58	27.6	137	129	119	78	44	42	38	33.8	91	86	80	71
20.0	64	60	55	28.1	139	131	121	78	42	40	37	34.4	93	87	81	71
20.5	61	58	53	28.6	141	132	122	78	41	38	36	35.1	94	88	82	72
21.0	59	56	51	29.2	142	134	124	78	39	37	34	35.7	95	89	83	72
21.5	57	54	50	29.7	144	135	125	78	38	36	33	36.4	96	90	84	72
22.0	55	52	48	30.2	145	137	127	79	37	35	32	37.0	97	91	84	72
22.5	53	50	46	30.7	147	139	128	79	36	33	31	37.6	98	92	85	72
23.0	52	49	45	31.2	149	140	129	79	34	32	30	38.3	99	93	86	72
23.5	50	47	43	31.8	150	141	131	79	33	31	29	38.9	100	94	87	73
24.0	48	46	42	32.3	152	143	132	79	32	30	28	39.5	101	95	88	73
24.5	47	44	41	32.8	153	144	134	79	31	29	27	40.1	102	96	89	73
25.0	45	43	40	33.3	155	146	135	80	30	29	26	40.7	103	97	90	73
25.5	44	42	38	33.8	156	147	136	80	29	28	26	41.4	104	98	91	73
26.0	43	40	37	34.3	158	149	137	80	29	27	25	42.0	105	99	92	73
26.5	42	39	36	34.8	159	150	139	80	28	26	24	42.6	106	100	93	74
27.0	40	38	35	35.3	161	151	140	80	27	25	23	43.2	107	101	93	74
27.5	39	37	34	35.8	162	153	141	80	26	25	23	43.8	108	102	94	74
28.0	38	36	33	36.2	164	154	143	81	26	24	22	44.4	109	103	95	74
28.5	37	35	32	36.7	165	156	144	81	25	23	22	45.0	110	104	96	74
29.0	36	34	32	37.2	167	157	145	81	24	23	21	45.6	111	105	97	74
30.0	35	32	30	38.2	169	159	147	81	23	22	20	46.8	113	106	98	75

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 37: Stocking levels for western larch in the ABGR/ACGL plant association (full stocking = 351).

	UPPER MANAGEMENT ZONE (SDI = 263)								LOWER MANAGEMENT ZONE (SDI = 176)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14143	13315	12313	1.9	77	73	67	59	9428	8877	8208	2.3	51	48	45	52
1.2	10317	9713	8982	2.2	81	76	71	60	6878	6476	5988	2.7	54	51	47	52
1.4	7902	7440	6879	2.5	84	80	74	60	5268	4960	4586	3.1	56	53	49	53
1.6	6272	5905	5460	2.8	88	82	76	61	4181	3937	3640	3.5	58	55	51	54
1.8	5116	4816	4454	3.1	90	85	79	62	3410	3211	2969	3.8	60	57	52	54
2.0	4263	4014	3712	3.4	93	88	81	62	2842	2676	2474	4.2	62	58	54	55
2.2	3615	3404	3147	3.7	95	90	83	63	2410	2269	2098	4.6	64	60	55	55
2.4	3110	2928	2708	4.0	98	92	85	63	2073	1952	1805	4.9	65	61	57	56
2.6	2708	2549	2357	4.3	100	94	87	63	1805	1700	1572	5.3	67	63	58	56
2.8	2382	2243	2074	4.6	102	96	89	64	1588	1495	1383	5.6	68	64	59	57
3.0	2114	1990	1840	4.9	104	98	90	64	1409	1327	1227	6.0	69	65	60	57
3.2	1891	1780	1646	5.2	106	99	92	64	1260	1187	1097	6.3	70	66	61	57
3.4	1702	1603	1482	5.4	107	101	93	65	1135	1069	988	6.7	72	67	62	57
3.6	1542	1452	1343	5.7	109	103	95	65	1028	968	895	7.0	73	68	63	58
3.8	1404	1322	1223	6.0	111	104	96	65	936	882	815	7.3	74	69	64	58
4.0	1285	1210	1119	6.3	112	106	98	66	857	807	746	7.7	75	70	65	58
4.2	1181	1112	1028	6.5	114	107	99	66	787	741	686	8.0	76	71	66	59
4.4	1090	1026	949	6.8	115	108	100	66	727	684	633	8.3	77	72	67	59
4.6	1009	950	879	7.1	116	110	101	66	673	633	586	8.6	78	73	68	59
4.8	938	883	816	7.3	118	111	103	66	625	588	544	9.0	79	74	68	59
5.0	874	822	761	7.6	119	112	104	67	582	548	507	9.3	79	75	69	59
5.2	816	769	711	7.8	120	113	105	67	544	512	474	9.6	80	76	70	60
5.4	765	720	666	8.1	122	115	106	67	510	480	444	9.9	81	76	71	60
5.6	718	676	625	8.4	123	116	107	67	479	451	417	10.3	82	77	71	60
5.8	676	636	588	8.6	124	117	108	67	451	424	392	10.6	83	78	72	60
6.0	637	600	555	8.9	125	118	109	68	425	400	370	10.9	83	79	73	60
6.2	602	567	524	9.1	126	119	110	68	401	378	349	11.2	84	79	73	60
6.4	570	537	496	9.4	127	120	111	68	380	358	331	11.5	85	80	74	61
6.6	540	509	470	9.6	128	121	112	68	360	339	314	11.8	86	81	75	61
6.8	513	483	447	9.9	129	122	113	68	342	322	298	12.1	86	81	75	61
7.0	488	460	425	10.2	130	123	114	68	325	306	283	12.4	87	82	76	61
7.2	465	438	405	10.4	131	124	114	68	310	292	270	12.7	88	83	76	61
7.4	443	417	386	10.7	132	125	115	69	296	278	257	13.0	88	83	77	61
7.6	423	399	369	10.9	133	126	116	69	282	266	246	13.3	89	84	77	61
7.8	405	381	352	11.1	134	126	117	69	270	254	235	13.7	90	84	78	62
8.0	387	365	337	11.4	135	127	118	69	258	243	225	14.0	90	85	78	62
8.2	371	350	323	11.6	136	128	119	69	247	233	215	14.3	91	85	79	62
8.4	356	335	310	11.9	137	129	119	69	237	223	207	14.6	91	86	80	62
8.6	342	322	298	12.1	138	130	120	69	228	215	198	14.9	92	87	80	62
8.8	329	309	286	12.4	139	131	121	69	219	206	191	15.2	93	87	81	62
9.0	316	298	275	12.6	140	131	122	69	211	198	183	15.5	93	88	81	62
9.2	304	286	265	12.9	140	132	122	70	203	191	177	15.7	94	88	82	62
9.4	293	276	255	13.1	141	133	123	70	195	184	170	16.0	94	89	82	62
9.6	283	266	246	13.3	142	134	124	70	188	177	164	16.3	95	89	82	63
9.8	273	257	237	13.6	143	134	124	70	182	171	158	16.6	95	90	83	63
10.0	263	248	229	13.8	144	135	125	70	176	165	153	16.9	96	90	83	63
10.5	242	228	211	14.4	146	137	127	70	161	152	140	17.7	97	91	84	63
11.0	223	210	194	15.0	147	139	128	70	149	140	130	18.4	98	93	86	63

Table 37: Stocking levels for western larch in the ABGR/ACGL plant association (full stocking = 351).

	UPPER MANAGEMENT ZONE (SDI = 263)								LOWER MANAGEMENT ZONE (SDI = 176)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	207	195	180	15.6	149	140	130	71	138	130	120	19.1	99	94	87	63
12.0	192	181	167	16.2	151	142	131	71	128	121	111	19.8	101	95	88	64
12.5	179	169	156	16.8	153	144	133	71	119	112	104	20.5	102	96	89	64
13.0	167	157	146	17.3	154	145	134	71	112	105	97	21.2	103	97	89	64
13.5	157	148	136	17.9	156	147	136	71	104	98	91	21.9	104	98	90	64
14.0	147	139	128	18.5	157	148	137	72	98	92	85	22.6	105	99	91	64
14.5	138	130	121	19.1	159	150	138	72	92	87	80	23.3	106	100	92	65
15.0	131	123	114	19.6	160	151	140	72	87	82	76	24.0	107	101	93	65
15.5	123	116	107	20.2	162	152	141	72	82	77	72	24.7	108	101	94	65
16.0	117	110	102	20.8	163	154	142	72	78	73	68	25.4	109	102	95	65
16.5	111	104	96	21.3	164	155	143	72	74	70	64	26.1	110	103	95	65
17.0	105	99	92	21.9	166	156	144	73	70	66	61	26.8	111	104	96	65
17.5	100	94	87	22.4	167	157	145	73	67	63	58	27.5	111	105	97	65
18.0	95	90	83	23.0	168	158	147	73	64	60	55	28.1	112	106	98	66
18.5	91	86	79	23.5	170	160	148	73	61	57	53	28.8	113	106	98	66
19.0	87	82	76	24.1	171	161	149	73	58	54	50	29.5	114	107	99	66
19.5	83	78	72	24.6	172	162	150	73	55	52	48	30.2	115	108	100	66
20.0	79	75	69	25.2	173	163	151	73	53	50	46	30.8	115	109	101	66
20.5	76	72	66	25.7	174	164	152	74	51	48	44	31.5	116	109	101	66
21.0	73	69	64	26.3	175	165	153	74	49	46	42	32.2	117	110	102	66
21.5	70	66	61	26.8	177	166	154	74	47	44	41	32.8	118	111	103	66
22.0	67	63	59	27.3	178	167	155	74	45	42	39	33.5	118	112	103	67
22.5	65	61	56	27.9	179	168	156	74	43	41	38	34.1	119	112	104	67
23.0	62	59	54	28.4	180	169	157	74	42	39	36	34.8	120	113	104	67
23.5	60	57	52	28.9	181	170	157	74	40	38	35	35.4	121	114	105	67
24.0	58	55	50	29.5	182	171	158	74	39	36	34	36.1	121	114	106	67
24.5	56	53	49	30.0	183	172	159	74	37	35	32	36.7	122	115	106	67
25.0	54	51	47	30.5	184	173	160	74	36	34	31	37.4	123	115	107	67
25.5	52	49	45	31.1	185	174	161	75	35	33	30	38.0	123	116	107	67
26.0	50	47	44	31.6	186	175	162	75	34	32	29	38.7	124	117	108	67
26.5	49	46	42	32.1	187	176	163	75	33	31	28	39.3	125	117	108	67
27.0	47	44	41	32.6	188	177	164	75	31	30	27	40.0	125	118	109	68
27.5	46	43	40	33.2	189	178	164	75	31	29	27	40.6	126	118	110	68
28.0	44	42	39	33.7	190	179	165	75	30	28	26	41.2	126	119	110	68
28.5	43	41	37	34.2	191	179	166	75	29	27	25	41.9	127	120	111	68
29.0	42	39	36	34.7	191	180	167	75	28	26	24	42.5	128	120	111	68
30.0	39	37	34	35.7	193	182	168	75	26	25	23	43.8	129	121	112	68

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 38: Stocking levels for Engelmann spruce in the ABGR/ACGL plant association (full stocking = 324).

	UPPER MANAGEMENT ZONE (SDI = 243)								LOWER MANAGEMENT ZONE (SDI = 162)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	12996	12236	11314	2.0	71	67	62	69	8664	8157	7543	2.4	47	44	41	62
1.2	9481	8926	8254	2.3	74	70	65	70	6320	5951	5503	2.8	50	47	43	63
1.4	7261	6837	6322	2.6	78	73	68	71	4841	4558	4214	3.2	52	49	45	64
1.6	5764	5426	5018	3.0	80	76	70	71	3842	3618	3345	3.6	54	51	47	64
1.8	4701	4426	4093	3.3	83	78	72	72	3134	2951	2728	4.0	55	52	48	65
2.0	3918	3689	3411	3.6	85	80	74	72	2612	2459	2274	4.4	57	54	50	65
2.2	3322	3128	2892	3.9	88	83	76	73	2215	2085	1928	4.8	58	55	51	66
2.4	2858	2691	2488	4.2	90	85	78	73	1905	1794	1659	5.1	60	56	52	66
2.6	2488	2343	2166	4.5	92	86	80	74	1659	1562	1444	5.5	61	58	53	67
2.8	2189	2061	1906	4.8	94	88	81	74	1459	1374	1270	5.9	62	59	54	67
3.0	1943	1829	1691	5.1	95	90	83	74	1295	1219	1128	6.2	64	60	55	67
3.2	1737	1636	1513	5.4	97	91	84	75	1158	1091	1008	6.6	65	61	56	67
3.4	1564	1473	1362	5.7	99	93	86	75	1043	982	908	6.9	66	62	57	68
3.6	1417	1334	1234	6.0	100	94	87	75	945	889	823	7.3	67	63	58	68
3.8	1291	1215	1124	6.2	102	96	88	75	860	810	749	7.6	68	64	59	68
4.0	1181	1112	1028	6.5	103	97	90	76	787	741	685	8.0	69	65	60	69
4.2	1085	1022	945	6.8	104	98	91	76	724	681	630	8.3	70	66	61	69
4.4	1001	943	872	7.1	106	100	92	76	668	629	581	8.7	70	66	61	69
4.6	927	873	807	7.4	107	101	93	76	618	582	538	9.0	71	67	62	69
4.8	862	811	750	7.6	108	102	94	76	574	541	500	9.4	72	68	63	69
5.0	803	756	699	7.9	109	103	95	77	535	504	466	9.7	73	69	64	70
5.2	750	706	653	8.2	111	104	96	77	500	471	435	10.0	74	69	64	70
5.4	703	662	612	8.5	112	105	97	77	468	441	408	10.4	75	70	65	70
5.6	660	621	574	8.7	113	106	98	77	440	414	383	10.7	75	71	66	70
5.8	621	585	541	9.0	114	107	99	77	414	390	360	11.0	76	72	66	70
6.0	586	551	510	9.3	115	108	100	77	390	368	340	11.4	77	72	67	70
6.2	553	521	482	9.5	116	109	101	78	369	347	321	11.7	77	73	67	71
6.4	524	493	456	9.8	117	110	102	78	349	329	304	12.0	78	73	68	71
6.6	497	468	432	10.1	118	111	103	78	331	312	288	12.3	79	74	68	71
6.8	472	444	411	10.3	119	112	104	78	314	296	274	12.6	79	75	69	71
7.0	449	422	390	10.6	120	113	104	78	299	282	260	13.0	80	75	70	71
7.2	427	402	372	10.9	121	114	105	78	285	268	248	13.3	81	76	70	71
7.4	407	384	355	11.1	122	115	106	78	272	256	236	13.6	81	76	71	71
7.6	389	366	339	11.4	123	115	107	79	259	244	226	13.9	82	77	71	72
7.8	372	350	324	11.6	123	116	107	79	248	233	216	14.2	82	77	72	72
8.0	356	335	310	11.9	124	117	108	79	237	223	207	14.6	83	78	72	72
8.2	341	321	297	12.1	125	118	109	79	227	214	198	14.9	83	79	73	72
8.4	327	308	285	12.4	126	119	110	79	218	205	190	15.2	84	79	73	72
8.6	314	296	273	12.7	127	119	110	79	209	197	182	15.5	84	80	74	72
8.8	302	284	263	12.9	128	120	111	79	201	189	175	15.8	85	80	74	72
9.0	290	273	253	13.2	128	121	112	79	194	182	169	16.1	86	81	74	72
9.2	280	263	243	13.4	129	122	112	79	186	175	162	16.4	86	81	75	72
9.4	269	254	234	13.7	130	122	113	80	180	169	156	16.7	87	81	75	73
9.6	260	245	226	13.9	131	123	114	80	173	163	151	17.0	87	82	76	73
9.8	251	236	218	14.2	131	124	114	80	167	157	145	17.4	88	82	76	73
10.0	242	228	211	14.4	132	124	115	80	161	152	140	17.7	88	83	77	73
10.5	222	209	194	15.0	134	126	116	80	148	140	129	18.4	89	84	78	73

Table 38: Stocking levels for Engelmann spruce in the ABGR/ACGL plant association (full stocking = 324).

	UPPER MANAGEMENT ZONE (SDI = 243)								LOWER MANAGEMENT ZONE (SDI = 162)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	205	193	179	15.7	135	128	118	80	137	129	119	19.2	90	85	79	73
11.5	190	179	165	16.3	137	129	119	81	127	119	110	19.9	91	86	80	73
12.0	177	166	154	16.9	139	131	121	81	118	111	102	20.7	92	87	80	74
12.5	164	155	143	17.5	140	132	122	81	110	103	95	21.4	93	88	81	74
13.0	154	145	134	18.1	142	133	123	81	102	96	89	22.2	94	89	82	74
13.5	144	136	125	18.7	143	135	125	81	96	90	84	22.9	95	90	83	74
14.0	135	127	118	19.3	145	136	126	81	90	85	78	23.6	96	91	84	74
14.5	127	120	111	19.9	146	137	127	82	85	80	74	24.4	97	92	85	75
15.0	120	113	104	20.5	147	139	128	82	80	75	70	25.1	98	92	85	75
15.5	113	107	99	21.1	149	140	129	82	76	71	66	25.8	99	93	86	75
16.0	107	101	93	21.6	150	141	130	82	72	67	62	26.5	100	94	87	75
16.5	102	96	89	22.2	151	142	132	82	68	64	59	27.2	101	95	88	75
17.0	97	91	84	22.8	152	143	133	82	64	61	56	27.9	102	96	88	75
17.5	92	87	80	23.4	154	145	134	83	61	58	53	28.7	102	96	89	75
18.0	88	82	76	24.0	155	146	135	83	58	55	51	29.4	103	97	90	76
18.5	83	79	73	24.5	156	147	136	83	56	52	48	30.1	104	98	90	76
19.0	80	75	69	25.1	157	148	137	83	53	50	46	30.8	105	99	91	76
19.5	76	72	66	25.7	158	149	138	83	51	48	44	31.5	105	99	92	76
20.0	73	69	64	26.3	159	150	139	83	49	46	42	32.2	106	100	92	76
20.5	70	66	61	26.8	160	151	139	83	47	44	41	32.9	107	101	93	76
21.0	67	63	58	27.4	161	152	140	83	45	42	39	33.5	108	101	94	76
21.5	64	61	56	28.0	162	153	141	83	43	40	37	34.2	108	102	94	76
22.0	62	58	54	28.5	163	154	142	84	41	39	36	34.9	109	103	95	77
22.5	60	56	52	29.1	164	155	143	84	40	37	35	35.6	110	103	95	77
23.0	57	54	50	29.6	165	156	144	84	38	36	33	36.3	110	104	96	77
23.5	55	52	48	30.2	166	157	145	84	37	35	32	37.0	111	104	96	77
24.0	53	50	46	30.7	167	157	146	84	35	33	31	37.7	111	105	97	77
24.5	51	48	45	31.3	168	158	146	84	34	32	30	38.3	112	106	98	77
25.0	50	47	43	31.8	169	159	147	84	33	31	29	39.0	113	106	98	77
25.5	48	45	42	32.4	170	160	148	84	32	30	28	39.7	113	107	99	77
26.0	46	44	40	32.9	171	161	149	84	31	29	27	40.4	114	107	99	77
26.5	45	42	39	33.5	172	162	149	84	30	28	26	41.0	114	108	100	77
27.0	43	41	38	34.0	173	162	150	85	29	27	25	41.7	115	108	100	77
27.5	42	40	37	34.6	173	163	151	85	28	26	24	42.4	116	109	101	78
28.0	41	38	35	35.1	174	164	152	85	27	26	24	43.0	116	109	101	78
28.5	40	37	34	35.7	175	165	152	85	26	25	23	43.7	117	110	102	78
29.0	38	36	33	36.2	176	166	153	85	26	24	22	44.4	117	110	102	78
30.0	36	34	31	37.3	178	167	155	85	24	23	21	45.7	118	111	103	78

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 39: Stocking levels for grand fir in the ABGR/ACGL plant association (full stocking = 461).

	UPPER MANAGEMENT ZONE (SDI = 346)								LOWER MANAGEMENT ZONE (SDI = 231)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	18541	17457	16142	1.6	101	95	88	77	12361	11638	10761	2.0	67	63	59	70
1.2	13526	12734	11775	1.9	106	100	92	78	9017	8490	7850	2.4	71	67	62	71
1.4	10360	9754	9019	2.2	111	104	96	79	6906	6502	6013	2.7	74	70	64	71
1.6	8223	7742	7159	2.5	115	108	100	79	5482	5161	4772	3.0	77	72	67	72
1.8	6707	6315	5839	2.7	119	112	103	80	4471	4210	3893	3.4	79	74	69	73
2.0	5589	5262	4866	3.0	122	115	106	80	3726	3508	3244	3.7	81	77	71	73
2.2	4740	4462	4126	3.3	125	118	109	81	3160	2975	2751	4.0	83	79	73	73
2.4	4077	3839	3550	3.5	128	121	112	81	2718	2559	2366	4.3	85	80	74	74
2.6	3550	3342	3091	3.8	131	123	114	82	2367	2228	2060	4.6	87	82	76	74
2.8	3123	2940	2719	4.0	134	126	116	82	2082	1960	1813	4.9	89	84	78	75
3.0	2772	2609	2413	4.3	136	128	118	82	1848	1740	1609	5.2	91	85	79	75
3.2	2479	2334	2158	4.5	138	130	121	83	1653	1556	1439	5.5	92	87	80	75
3.4	2232	2101	1943	4.7	141	132	123	83	1488	1401	1295	5.8	94	88	82	76
3.6	2022	1904	1760	5.0	143	135	124	83	1348	1269	1173	6.1	95	90	83	76
3.8	1841	1734	1603	5.2	145	137	126	83	1228	1156	1069	6.4	97	91	84	76
4.0	1685	1586	1467	5.5	147	138	128	84	1123	1058	978	6.7	98	92	85	76
4.2	1549	1458	1348	5.7	149	140	130	84	1032	972	899	7.0	99	94	86	77
4.4	1429	1345	1244	5.9	151	142	131	84	953	897	829	7.3	101	95	88	77
4.6	1323	1246	1152	6.2	153	144	133	84	882	830	768	7.6	102	96	89	77
4.8	1229	1157	1070	6.4	154	145	134	85	819	771	713	7.8	103	97	90	77
5.0	1145	1078	997	6.6	156	147	136	85	764	719	665	8.1	104	98	91	77
5.2	1070	1008	932	6.9	158	149	137	85	713	672	621	8.4	105	99	92	78
5.4	1003	944	873	7.1	159	150	139	85	668	629	582	8.7	106	100	93	78
5.6	941	886	820	7.3	161	152	140	85	628	591	546	9.0	107	101	93	78
5.8	886	834	771	7.5	163	153	142	85	591	556	514	9.2	108	102	94	78
6.0	835	787	727	7.8	164	154	143	86	557	524	485	9.5	109	103	95	78
6.2	789	743	687	8.0	166	156	144	86	526	495	458	9.8	110	104	96	78
6.4	747	704	651	8.2	167	157	145	86	498	469	434	10.0	111	105	97	79
6.6	708	667	617	8.4	168	158	147	86	472	445	411	10.3	112	106	98	79
6.8	673	633	586	8.6	170	160	148	86	449	422	391	10.6	113	107	98	79
7.0	640	602	557	8.9	171	161	149	86	427	402	371	10.9	114	107	99	79
7.2	609	574	531	9.1	172	162	150	86	406	383	354	11.1	115	108	100	79
7.4	581	547	506	9.3	174	163	151	87	388	365	337	11.4	116	109	101	79
7.6	555	523	483	9.5	175	165	152	87	370	348	322	11.7	117	110	101	79
7.8	531	500	462	9.7	176	166	153	87	354	333	308	11.9	117	111	102	80
8.0	508	478	442	10.0	177	167	154	87	339	319	295	12.2	118	111	103	80
8.2	487	458	424	10.2	178	168	155	87	324	305	282	12.5	119	112	104	80
8.4	467	440	406	10.4	180	169	156	87	311	293	271	12.7	120	113	104	80
8.6	448	422	390	10.6	181	170	157	87	299	281	260	13.0	121	113	105	80
8.8	431	406	375	10.8	182	171	158	87	287	270	250	13.2	121	114	106	80
9.0	414	390	361	11.0	183	172	159	88	276	260	240	13.5	122	115	106	80
9.2	399	376	347	11.2	184	173	160	88	266	250	231	13.8	123	116	107	80
9.4	384	362	335	11.4	185	174	161	88	256	241	223	14.0	123	116	107	81
9.6	371	349	323	11.7	186	175	162	88	247	233	215	14.3	124	117	108	81
9.8	358	337	311	11.9	187	176	163	88	238	224	208	14.5	125	118	109	81
10.0	345	325	301	12.1	188	177	164	88	230	217	200	14.8	126	118	109	81
10.5	317	299	276	12.6	191	180	166	88	212	199	184	15.4	127	120	111	81
11.0	293	276	255	13.1	193	182	168	89	195	184	170	16.1	129	121	112	81

Table 39: Stocking levels for grand fir in the ABGR/ACGL plant association (full stocking = 461).

	UPPER MANAGEMENT ZONE (SDI = 346)								LOWER MANAGEMENT ZONE (SDI = 231)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	271	255	236	13.6	196	184	170	89	181	170	157	16.7	130	123	113	81
12.0	252	237	219	14.1	198	186	172	89	168	158	146	17.3	132	124	115	82
12.5	235	221	204	14.6	200	188	174	89	156	147	136	17.9	133	126	116	82
13.0	219	206	191	15.1	202	190	176	89	146	138	127	18.5	135	127	117	82
13.5	205	193	179	15.6	204	192	178	90	137	129	119	19.2	136	128	119	82
14.0	193	182	168	16.1	206	194	180	90	129	121	112	19.8	137	129	120	82
14.5	182	171	158	16.6	208	196	181	90	121	114	105	20.4	139	131	121	83
15.0	171	161	149	17.1	210	198	183	90	114	107	99	21.0	140	132	122	83
15.5	162	152	141	17.6	212	200	185	90	108	102	94	21.6	141	133	123	83
16.0	153	144	133	18.1	214	201	186	90	102	96	89	22.2	143	134	124	83
16.5	145	137	126	18.6	216	203	188	91	97	91	84	22.8	144	135	125	83
17.0	138	130	120	19.1	217	205	189	91	92	87	80	23.4	145	136	126	83
17.5	131	123	114	19.6	219	206	191	91	87	82	76	24.0	146	137	127	84
18.0	125	118	109	20.1	221	208	192	91	83	78	72	24.6	147	139	128	84
18.5	119	112	104	20.6	222	209	194	91	79	75	69	25.2	148	140	129	84
19.0	114	107	99	21.0	224	211	195	91	76	71	66	25.8	149	141	130	84
19.5	109	102	95	21.5	226	212	196	91	72	68	63	26.3	150	142	131	84
20.0	104	98	91	22.0	227	214	198	91	69	65	60	26.9	151	143	132	84
20.5	100	94	87	22.5	229	215	199	92	66	63	58	27.5	152	143	133	84
21.0	96	90	83	22.9	230	217	200	92	64	60	56	28.1	153	144	134	84
21.5	92	86	80	23.4	232	218	202	92	61	58	53	28.7	154	145	134	85
22.0	88	83	77	23.9	233	219	203	92	59	55	51	29.2	155	146	135	85
22.5	85	80	74	24.3	234	221	204	92	57	53	49	29.8	156	147	136	85
23.0	82	77	71	24.8	236	222	205	92	54	51	47	30.4	157	148	137	85
23.5	79	74	69	25.3	237	223	206	92	52	49	46	31.0	158	149	138	85
24.0	76	71	66	25.7	239	225	208	92	51	48	44	31.5	159	150	138	85
24.5	73	69	64	26.2	240	226	209	92	49	46	43	32.1	160	151	139	85
25.0	71	67	62	26.7	241	227	210	93	47	44	41	32.7	161	151	140	85
25.5	68	64	60	27.1	242	228	211	93	46	43	40	33.2	162	152	141	85
26.0	66	62	58	27.6	244	229	212	93	44	41	38	33.8	162	153	141	85
26.5	64	60	56	28.0	245	231	213	93	43	40	37	34.3	163	154	142	86
27.0	62	58	54	28.5	246	232	214	93	41	39	36	34.9	164	155	143	86
27.5	60	56	52	29.0	247	233	215	93	40	38	35	35.5	165	155	144	86
28.0	58	55	51	29.4	249	234	216	93	39	36	34	36.0	166	156	144	86
28.5	56	53	49	29.9	250	235	218	93	38	35	33	36.6	167	157	145	86
29.0	55	52	48	30.3	251	236	219	93	36	34	32	37.1	167	158	146	86
30.0	52	49	45	31.2	253	239	221	93	34	32	30	38.2	169	159	147	86

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 40: Stocking levels for Engelmann spruce in the ABGR/TABR/CLUN plant association (full stocking = 426).

	UPPER MANAGEMENT ZONE (SDI = 320)								LOWER MANAGEMENT ZONE (SDI = 213)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	17088	16088	14877	1.7	93	88	81	74	11392	10726	9918	2.1	62	58	54	67
1.2	12466	11736	10852	2.0	98	92	85	75	8310	7824	7235	2.5	65	61	57	68
1.4	9548	8989	8312	2.3	102	96	89	75	6365	5993	5541	2.8	68	64	59	68
1.6	7578	7135	6598	2.6	106	100	92	76	5052	4757	4398	3.2	71	66	61	69
1.8	6181	5820	5381	2.9	109	103	95	77	4121	3880	3588	3.5	73	69	63	70
2.0	5151	4850	4485	3.1	112	106	98	77	3434	3233	2990	3.8	75	71	65	70
2.2	4368	4113	3803	3.4	115	109	100	78	2912	2742	2535	4.2	77	72	67	70
2.4	3758	3538	3271	3.7	118	111	103	78	2505	2359	2181	4.5	79	74	69	71
2.6	3272	3080	2848	3.9	121	114	105	78	2181	2054	1899	4.8	80	76	70	71
2.8	2878	2710	2506	4.2	123	116	107	79	1919	1807	1670	5.1	82	77	71	72
3.0	2554	2405	2224	4.4	125	118	109	79	1703	1603	1483	5.4	84	79	73	72
3.2	2284	2151	1989	4.7	128	120	111	79	1523	1434	1326	5.7	85	80	74	72
3.4	2057	1937	1791	4.9	130	122	113	80	1371	1291	1194	6.1	86	81	75	73
3.6	1863	1754	1622	5.2	132	124	115	80	1242	1170	1081	6.4	88	83	76	73
3.8	1697	1598	1477	5.4	134	126	116	80	1131	1065	985	6.7	89	84	78	73
4.0	1553	1462	1352	5.7	136	128	118	80	1035	975	901	7.0	90	85	79	73
4.2	1427	1344	1242	5.9	137	129	120	81	951	896	828	7.3	92	86	80	74
4.4	1317	1240	1146	6.2	139	131	121	81	878	827	764	7.6	93	87	81	74
4.6	1219	1148	1062	6.4	141	132	123	81	813	765	708	7.9	94	88	82	74
4.8	1133	1067	986	6.7	142	134	124	81	755	711	657	8.2	95	89	83	74
5.0	1056	994	919	6.9	144	136	125	81	704	663	613	8.5	96	90	84	74
5.2	986	929	859	7.1	145	137	127	82	658	619	572	8.7	97	91	84	75
5.4	924	870	804	7.4	147	138	128	82	616	580	536	9.0	98	92	85	75
5.6	868	817	755	7.6	148	140	129	82	578	545	504	9.3	99	93	86	75
5.8	817	769	711	7.8	150	141	130	82	544	512	474	9.6	100	94	87	75
6.0	770	725	670	8.1	151	142	132	82	513	483	447	9.9	101	95	88	75
6.2	728	685	633	8.3	153	144	133	82	485	457	422	10.2	102	96	89	75
6.4	689	648	600	8.5	154	145	134	83	459	432	400	10.5	103	97	89	75
6.6	653	615	568	8.8	155	146	135	83	435	410	379	10.7	103	97	90	76
6.8	620	584	540	9.0	156	147	136	83	413	389	360	11.0	104	98	91	76
7.0	590	555	513	9.2	158	148	137	83	393	370	342	11.3	105	99	91	76
7.2	562	529	489	9.5	159	150	138	83	374	353	326	11.6	106	100	92	76
7.4	536	504	466	9.7	160	151	139	83	357	336	311	11.9	107	100	93	76
7.6	512	482	445	9.9	161	152	140	83	341	321	297	12.1	107	101	94	76
7.8	489	460	426	10.1	162	153	141	83	326	307	284	12.4	108	102	94	76
8.0	468	441	408	10.4	163	154	142	84	312	294	272	12.7	109	103	95	77
8.2	449	422	390	10.6	164	155	143	84	299	282	260	13.0	110	103	95	77
8.4	430	405	375	10.8	166	156	144	84	287	270	250	13.2	110	104	96	77
8.6	413	389	360	11.0	167	157	145	84	275	259	240	13.5	111	105	97	77
8.8	397	374	346	11.3	168	158	146	84	265	249	230	13.8	112	105	97	77
9.0	382	359	332	11.5	169	159	147	84	255	240	222	14.1	112	106	98	77
9.2	368	346	320	11.7	170	160	148	84	245	231	213	14.3	113	107	98	77
9.4	354	333	308	11.9	171	161	149	84	236	222	206	14.6	114	107	99	77
9.6	341	322	297	12.1	172	162	149	84	228	214	198	14.9	114	108	100	77
9.8	330	310	287	12.4	173	163	150	85	220	207	191	15.1	115	108	100	77
10.0	318	300	277	12.6	174	163	151	85	212	200	185	15.4	116	109	101	78
10.5	292	275	255	13.1	176	166	153	85	195	184	170	16.1	117	110	102	78

Table 40: Stocking levels for Engelmann spruce in the ABGR/TABR/CLUN plant association (full stocking = 426).

	UPPER MANAGEMENT ZONE (SDI = 320)								LOWER MANAGEMENT ZONE (SDI = 213)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	270	254	235	13.7	178	168	155	85	180	169	157	16.7	119	112	103	78
11.5	250	235	218	14.2	180	170	157	85	167	157	145	17.4	120	113	105	78
12.0	232	219	202	14.7	182	172	159	86	155	146	135	18.0	122	114	106	78
12.5	216	204	188	15.2	184	174	160	86	144	136	126	18.7	123	116	107	79
13.0	202	190	176	15.8	186	175	162	86	135	127	117	19.3	124	117	108	79
13.5	189	178	165	16.3	188	177	164	86	126	119	110	20.0	125	118	109	79
14.0	178	167	155	16.8	190	179	165	86	119	112	103	20.6	127	119	110	79
14.5	167	158	146	17.3	192	181	167	86	112	105	97	21.2	128	120	111	79
15.0	158	149	137	17.9	194	182	169	87	105	99	92	21.9	129	122	112	79
15.5	149	140	130	18.4	195	184	170	87	99	94	87	22.5	130	123	113	80
16.0	141	133	123	18.9	197	186	172	87	94	89	82	23.1	131	124	114	80
16.5	134	126	116	19.4	199	187	173	87	89	84	78	23.7	132	125	115	80
17.0	127	120	111	19.9	200	189	174	87	85	80	74	24.4	134	126	116	80
17.5	121	114	105	20.4	202	190	176	87	81	76	70	25.0	135	127	117	80
18.0	115	108	100	20.9	203	191	177	87	77	72	67	25.6	136	128	118	80
18.5	110	103	96	21.4	205	193	178	88	73	69	64	26.2	137	129	119	80
19.0	105	99	91	21.9	206	194	180	88	70	66	61	26.8	138	130	120	81
19.5	100	94	87	22.4	208	196	181	88	67	63	58	27.4	139	130	121	81
20.0	96	90	84	22.9	209	197	182	88	64	60	56	28.0	140	131	121	81
20.5	92	87	80	23.4	211	198	183	88	61	58	53	28.7	140	132	122	81
21.0	88	83	77	23.9	212	200	185	88	59	55	51	29.3	141	133	123	81
21.5	85	80	74	24.4	213	201	186	88	56	53	49	29.9	142	134	124	81
22.0	81	77	71	24.9	215	202	187	88	54	51	47	30.5	143	135	125	81
22.5	78	74	68	25.4	216	203	188	88	52	49	45	31.1	144	136	125	81
23.0	75	71	66	25.8	217	205	189	89	50	47	44	31.7	145	136	126	81
23.5	73	68	63	26.3	219	206	190	89	48	46	42	32.2	146	137	127	82
24.0	70	66	61	26.8	220	207	191	89	47	44	41	32.8	147	138	128	82
24.5	68	64	59	27.3	221	208	192	89	45	42	39	33.4	147	139	128	82
25.0	65	61	57	27.8	222	209	194	89	43	41	38	34.0	148	140	129	82
25.5	63	59	55	28.3	223	210	195	89	42	40	37	34.6	149	140	130	82
26.0	61	57	53	28.7	225	211	196	89	41	38	35	35.2	150	141	130	82
26.5	59	56	51	29.2	226	213	197	89	39	37	34	35.8	151	142	131	82
27.0	57	54	50	29.7	227	214	198	89	38	36	33	36.4	151	142	132	82
27.5	55	52	48	30.2	228	215	199	89	37	35	32	36.9	152	143	132	82
28.0	54	50	47	30.6	229	216	200	90	36	34	31	37.5	153	144	133	82
28.5	52	49	45	31.1	230	217	200	90	35	33	30	38.1	154	145	134	83
29.0	50	47	44	31.6	231	218	201	90	34	32	29	38.7	154	145	134	83
30.0	48	45	41	32.5	233	220	203	90	32	30	28	39.8	156	147	136	83

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 41: Stocking levels for grand fir in the ABGR/TABR/CLUN plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22524	21206	19609	1.5	123	116	107	80	15016	14137	13073	1.8	82	77	71	73
1.2	16431	15469	14304	1.7	129	121	112	81	10954	10313	9536	2.1	86	81	75	74
1.4	12584	11848	10956	2.0	135	127	117	82	8390	7899	7304	2.4	90	84	78	75
1.6	9989	9404	8696	2.2	139	131	121	83	6659	6270	5797	2.7	93	88	81	75
1.8	8147	7671	7093	2.5	144	136	125	83	5432	5114	4729	3.0	96	90	84	76
2.0	6790	6393	5911	2.7	148	139	129	84	4527	4262	3941	3.3	99	93	86	77
2.2	5758	5421	5013	3.0	152	143	132	84	3838	3614	3342	3.6	101	95	88	77
2.4	4953	4663	4312	3.2	156	147	135	85	3302	3109	2875	3.9	104	98	90	77
2.6	4313	4060	3755	3.4	159	150	138	85	2875	2707	2503	4.2	106	100	92	78
2.8	3794	3572	3303	3.6	162	153	141	85	2529	2381	2202	4.5	108	102	94	78
3.0	3367	3170	2931	3.9	165	156	144	86	2245	2113	1954	4.7	110	104	96	78
3.2	3011	2835	2621	4.1	168	158	146	86	2007	1890	1748	5.0	112	106	98	79
3.4	2711	2553	2360	4.3	171	161	149	86	1808	1702	1574	5.3	114	107	99	79
3.6	2456	2312	2138	4.5	174	163	151	87	1637	1542	1425	5.5	116	109	101	79
3.8	2237	2106	1947	4.7	176	166	153	87	1491	1404	1298	5.8	117	111	102	80
4.0	2047	1927	1782	5.0	179	168	156	87	1365	1285	1188	6.1	119	112	104	80
4.2	1881	1771	1638	5.2	181	170	158	87	1254	1181	1092	6.3	121	114	105	80
4.4	1736	1634	1511	5.4	183	173	160	88	1157	1089	1007	6.6	122	115	106	80
4.6	1607	1513	1399	5.6	185	175	161	88	1071	1009	933	6.9	124	116	108	81
4.8	1493	1406	1300	5.8	188	177	163	88	995	937	867	7.1	125	118	109	81
5.0	1391	1310	1211	6.0	190	179	165	88	928	873	808	7.4	126	119	110	81
5.2	1300	1224	1132	6.2	192	181	167	88	867	816	755	7.6	128	120	111	81
5.4	1218	1147	1060	6.4	194	182	169	89	812	764	707	7.9	129	122	112	81
5.6	1144	1077	996	6.6	196	184	170	89	762	718	664	8.1	130	123	114	81
5.8	1076	1013	937	6.8	197	186	172	89	717	676	625	8.4	132	124	115	82
6.0	1015	956	884	7.0	199	188	173	89	677	637	589	8.6	133	125	116	82
6.2	959	903	835	7.2	201	189	175	89	639	602	557	8.9	134	126	117	82
6.4	908	855	790	7.4	203	191	177	89	605	570	527	9.1	135	127	118	82
6.6	861	810	749	7.6	204	193	178	90	574	540	500	9.4	136	128	119	82
6.8	817	770	712	7.8	206	194	179	90	545	513	474	9.6	137	129	120	82
7.0	777	732	677	8.0	208	196	181	90	518	488	451	9.9	139	130	121	83
7.2	740	697	645	8.2	209	197	182	90	494	465	430	10.1	140	131	121	83
7.4	706	665	615	8.4	211	199	184	90	471	443	410	10.3	141	132	122	83
7.6	674	635	587	8.6	212	200	185	90	450	423	391	10.6	142	133	123	83
7.8	645	607	561	8.8	214	201	186	90	430	405	374	10.8	143	134	124	83
8.0	617	581	537	9.0	215	203	188	90	411	387	358	11.1	144	135	125	83
8.2	591	557	515	9.2	217	204	189	91	394	371	343	11.3	145	136	126	83
8.4	567	534	494	9.4	218	205	190	91	378	356	329	11.5	145	137	127	83
8.6	544	513	474	9.6	220	207	191	91	363	342	316	11.8	146	138	127	84
8.8	523	493	456	9.8	221	208	192	91	349	328	304	12.0	147	139	128	84
9.0	503	474	438	10.0	222	209	194	91	336	316	292	12.2	148	140	129	84
9.2	484	456	422	10.2	224	211	195	91	323	304	281	12.5	149	140	130	84
9.4	467	439	406	10.4	225	212	196	91	311	293	271	12.7	150	141	131	84
9.6	450	424	392	10.6	226	213	197	91	300	283	261	12.9	151	142	131	84
9.8	434	409	378	10.8	228	214	198	91	290	273	252	13.2	152	143	132	84
10.0	419	395	365	11.0	229	215	199	92	280	263	243	13.4	153	144	133	84
10.5	385	363	336	11.4	232	218	202	92	257	242	224	14.0	155	145	135	85

Table 41: Stocking levels for grand fir in the ABGR/TABR/CLUN plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	356	335	310	11.9	235	221	204	92	237	223	206	14.6	156	147	136	85
11.5	329	310	287	12.4	238	224	207	92	220	207	191	15.1	158	149	138	85
12.0	306	288	266	12.8	240	226	209	92	204	192	178	15.7	160	151	139	85
12.5	285	268	248	13.3	243	229	212	93	190	179	165	16.3	162	152	141	85
13.0	266	251	232	13.7	246	231	214	93	178	167	155	16.8	164	154	143	86
13.5	250	235	217	14.2	248	234	216	93	166	157	145	17.4	165	156	144	86
14.0	234	221	204	14.7	251	236	218	93	156	147	136	17.9	167	157	145	86
14.5	221	208	192	15.1	253	238	220	93	147	138	128	18.5	169	159	147	86
15.0	208	196	181	15.6	255	240	222	94	139	131	121	19.0	170	160	148	86
15.5	197	185	171	16.0	257	242	224	94	131	123	114	19.6	172	162	149	86
16.0	186	175	162	16.4	260	245	226	94	124	117	108	20.1	173	163	151	87
16.5	176	166	154	16.9	262	247	228	94	118	111	102	20.7	175	164	152	87
17.0	167	158	146	17.3	264	249	230	94	112	105	97	21.2	176	166	153	87
17.5	159	150	139	17.8	266	250	232	94	106	100	92	21.8	177	167	154	87
18.0	152	143	132	18.2	268	252	233	94	101	95	88	22.3	179	168	156	87
18.5	145	136	126	18.6	270	254	235	95	96	91	84	22.8	180	170	157	87
19.0	138	130	120	19.1	272	256	237	95	92	87	80	23.4	181	171	158	87
19.5	132	124	115	19.5	274	258	239	95	88	83	77	23.9	183	172	159	88
20.0	126	119	110	19.9	276	260	240	95	84	79	73	24.4	184	173	160	88
20.5	121	114	105	20.4	278	261	242	95	81	76	70	25.0	185	174	161	88
21.0	116	109	101	20.8	279	263	243	95	77	73	67	25.5	186	175	162	88
21.5	112	105	97	21.2	281	265	245	95	74	70	65	26.0	188	177	163	88
22.0	107	101	93	21.7	283	266	246	95	71	67	62	26.5	189	178	164	88
22.5	103	97	90	22.1	285	268	248	96	69	65	60	27.0	190	179	165	88
23.0	99	93	86	22.5	286	270	249	96	66	62	58	27.6	191	180	166	88
23.5	96	90	83	22.9	288	271	251	96	64	60	56	28.1	192	181	167	88
24.0	92	87	80	23.4	290	273	252	96	61	58	54	28.6	193	182	168	89
24.5	89	84	77	23.8	291	274	254	96	59	56	52	29.1	194	183	169	89
25.0	86	81	75	24.2	293	276	255	96	57	54	50	29.6	195	184	170	89
25.5	83	78	72	24.6	295	277	256	96	55	52	48	30.1	196	185	171	89
26.0	80	76	70	25.0	296	279	258	96	54	50	47	30.7	197	186	172	89
26.5	78	73	68	25.4	298	280	259	96	52	49	45	31.2	198	187	173	89
27.0	75	71	65	25.9	299	282	260	96	50	47	44	31.7	199	188	174	89
27.5	73	69	63	26.3	301	283	262	96	49	46	42	32.2	200	189	174	89
28.0	71	67	61	26.7	302	284	263	97	47	44	41	32.7	201	190	175	89
28.5	69	65	60	27.1	304	286	264	97	46	43	40	33.2	202	191	176	89
29.0	66	63	58	27.5	305	287	265	97	44	42	39	33.7	203	191	177	89
30.0	63	59	55	28.3	308	290	268	97	42	39	36	34.7	205	193	179	90

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 42: Stocking levels for Douglas-fir in the ABGR/TABR/LIBO2 plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9249	8708	8053	2.3	50	47	44	62	6166	5806	5368	2.9	34	32	29	55
1.2	7023	6613	6115	2.7	55	52	48	63	4682	4408	4076	3.3	37	35	32	57
1.4	5565	5239	4845	3.0	59	56	52	64	3710	3493	3230	3.7	40	37	35	58
1.6	4549	4283	3960	3.3	64	60	55	65	3033	2855	2640	4.1	42	40	37	59
1.8	3808	3585	3315	3.6	67	63	59	66	2538	2390	2210	4.5	45	42	39	60
2.0	3248	3058	2827	3.9	71	67	62	67	2165	2038	1885	4.8	47	44	41	61
2.2	2812	2648	2448	4.2	74	70	65	68	1875	1765	1632	5.2	49	47	43	61
2.4	2466	2322	2147	4.5	77	73	67	68	1644	1548	1431	5.5	52	49	45	62
2.6	2185	2057	1902	4.8	81	76	70	69	1457	1372	1268	5.9	54	51	47	63
2.8	1954	1840	1701	5.1	84	79	73	70	1303	1226	1134	6.2	56	52	48	63
3.0	1761	1658	1533	5.3	86	81	75	70	1174	1105	1022	6.5	58	54	50	64
3.2	1597	1504	1390	5.6	89	84	78	71	1065	1002	927	6.9	59	56	52	64
3.4	1457	1372	1269	5.9	92	87	80	71	972	915	846	7.2	61	58	53	65
3.6	1337	1259	1164	6.1	94	89	82	72	891	839	776	7.5	63	59	55	65
3.8	1232	1160	1073	6.4	97	91	84	72	821	773	715	7.8	65	61	56	66
4.0	1140	1074	993	6.6	100	94	87	73	760	716	662	8.1	66	62	58	66
4.2	1059	997	922	6.9	102	96	89	73	706	665	615	8.4	68	64	59	66
4.4	987	930	860	7.1	104	98	91	73	658	620	573	8.7	70	65	61	67
4.6	923	869	804	7.4	107	100	93	74	616	580	536	9.0	71	67	62	67
4.8	866	815	754	7.6	109	102	95	74	577	543	503	9.3	73	68	63	67
5.0	814	766	709	7.9	111	105	97	74	543	511	472	9.6	74	70	64	68
5.2	767	722	668	8.1	113	107	99	75	512	482	445	9.9	75	71	66	68
5.4	725	682	631	8.3	115	109	100	75	483	455	421	10.2	77	72	67	68
5.6	686	646	597	8.6	117	110	102	75	457	431	398	10.5	78	74	68	69
5.8	651	613	566	8.8	119	112	104	75	434	408	378	10.8	80	75	69	69
6.0	618	582	538	9.0	121	114	106	76	412	388	359	11.0	81	76	70	69
6.2	588	554	512	9.2	123	116	107	76	392	369	341	11.3	82	77	72	69
6.4	561	528	488	9.5	125	118	109	76	374	352	325	11.6	84	79	73	70
6.6	535	504	466	9.7	127	120	111	76	357	336	311	11.9	85	80	74	70
6.8	512	482	445	9.9	129	122	112	77	341	321	297	12.1	86	81	75	70
7.0	490	461	426	10.1	131	123	114	77	327	307	284	12.4	87	82	76	70
7.2	469	442	409	10.4	133	125	116	77	313	295	272	12.7	88	83	77	71
7.4	450	424	392	10.6	135	127	117	77	300	283	261	12.9	90	84	78	71
7.6	433	407	377	10.8	136	128	119	78	288	272	251	13.2	91	86	79	71
7.8	416	392	362	11.0	138	130	120	78	277	261	241	13.5	92	87	80	71
8.0	400	377	349	11.2	140	132	122	78	267	251	232	13.7	93	88	81	71
8.2	386	363	336	11.4	141	133	123	78	257	242	224	14.0	94	89	82	72
8.4	372	350	324	11.6	143	135	125	78	248	233	216	14.2	95	90	83	72
8.6	359	338	312	11.8	145	136	126	79	239	225	208	14.5	97	91	84	72
8.8	347	326	302	12.0	146	138	127	79	231	218	201	14.8	98	92	85	72
9.0	335	316	292	12.3	148	139	129	79	223	210	195	15.0	99	93	86	72
9.2	324	305	282	12.5	150	141	130	79	216	203	188	15.3	100	94	87	73
9.4	314	295	273	12.7	151	142	132	79	209	197	182	15.5	101	95	88	73
9.6	304	286	265	12.9	153	144	133	79	203	191	176	15.8	102	96	89	73
9.8	295	277	257	13.1	154	145	134	80	196	185	171	16.0	103	97	90	73
10.0	286	269	249	13.3	156	147	136	80	191	179	166	16.2	104	98	90	73
10.5	266	250	231	13.8	160	150	139	80	177	167	154	16.9	106	100	93	74

Table 42: Stocking levels for Douglas-fir in the ABGR/TABR/LIBO2 plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	248	233	215	14.3	163	154	142	80	165	155	144	17.5	109	103	95	74
11.5	231	218	202	14.7	167	157	145	81	154	145	134	18.1	111	105	97	74
12.0	217	204	189	15.2	170	160	148	81	145	136	126	18.6	114	107	99	75
12.5	204	192	178	15.7	174	164	151	81	136	128	118	19.2	116	109	101	75
13.0	192	181	167	16.2	177	167	154	82	128	121	112	19.8	118	111	103	75
13.5	182	171	158	16.6	181	170	157	82	121	114	105	20.4	120	113	105	76
14.0	172	162	150	17.1	184	173	160	82	115	108	100	20.9	123	115	107	76
14.5	163	154	142	17.6	187	176	163	83	109	102	95	21.5	125	117	109	76
15.0	155	146	135	18.0	190	179	166	83	103	97	90	22.1	127	119	110	76
15.5	147	139	128	18.5	193	182	168	83	98	93	86	22.6	129	121	112	77
16.0	141	132	122	18.9	196	185	171	83	94	88	82	23.2	131	123	114	77
16.5	134	126	117	19.4	199	188	173	84	89	84	78	23.7	133	125	116	77
17.0	128	121	112	19.8	202	190	176	84	86	81	74	24.3	135	127	117	77
17.5	123	116	107	20.2	205	193	179	84	82	77	71	24.8	137	129	119	78
18.0	118	111	102	20.7	208	196	181	84	78	74	68	25.3	139	131	121	78
18.5	113	106	98	21.1	211	198	183	85	75	71	66	25.9	140	132	122	78
19.0	108	102	94	21.5	214	201	186	85	72	68	63	26.4	142	134	124	78
19.5	104	98	91	22.0	216	204	188	85	70	65	61	26.9	144	136	126	78
20.0	100	94	87	22.4	219	206	191	85	67	63	58	27.4	146	137	127	79
20.5	97	91	84	22.8	222	209	193	85	64	61	56	27.9	148	139	129	79
21.0	93	88	81	23.2	224	211	195	86	62	59	54	28.4	149	141	130	79
21.5	90	85	78	23.6	227	214	197	86	60	56	52	29.0	151	142	132	79
22.0	87	82	76	24.1	229	216	200	86	58	55	50	29.5	153	144	133	79
22.5	84	79	73	24.5	232	218	202	86	56	53	49	30.0	155	146	135	80
23.0	81	77	71	24.9	234	221	204	86	54	51	47	30.5	156	147	136	80
23.5	79	74	68	25.3	237	223	206	86	52	49	46	31.0	158	149	138	80
24.0	76	72	66	25.7	239	225	208	87	51	48	44	31.5	160	150	139	80
24.5	74	70	64	26.1	242	228	211	87	49	46	43	32.0	161	152	140	80
25.0	72	67	62	26.5	244	230	213	87	48	45	42	32.5	163	153	142	80
25.5	70	65	61	26.9	247	232	215	87	46	44	40	32.9	164	155	143	81
26.0	68	64	59	27.3	249	234	217	87	45	42	39	33.4	166	156	145	81
26.5	66	62	57	27.7	251	237	219	87	44	41	38	33.9	168	158	146	81
27.0	64	60	56	28.1	254	239	221	88	43	40	37	34.4	169	159	147	81
27.5	62	58	54	28.5	256	241	223	88	41	39	36	34.9	171	161	149	81
28.0	60	57	53	28.9	258	243	225	88	40	38	35	35.3	172	162	150	81
28.5	59	55	51	29.3	260	245	227	88	39	37	34	35.8	174	163	151	81
29.0	57	54	50	29.6	263	247	229	88	38	36	33	36.3	175	165	152	82
30.0	54	51	47	30.4	267	251	233	88	36	34	32	37.2	178	168	155	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 43: Stocking levels for western larch in the ABGR/TABR/LIBO2 plant association (full stocking = 302).

	UPPER MANAGEMENT ZONE (SDI = 227)								LOWER MANAGEMENT ZONE (SDI = 151)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	12169	11457	10594	2.0	66	62	58	56	8112	7638	7063	2.5	44	42	39	49
1.2	8877	8357	7728	2.4	70	66	61	57	5918	5572	5152	2.9	46	44	40	50
1.4	6799	6401	5919	2.7	73	68	63	58	4533	4267	3946	3.3	48	46	42	51
1.6	5396	5081	4698	3.1	75	71	66	58	3598	3387	3132	3.7	50	47	44	51
1.8	4402	4144	3832	3.4	78	73	68	59	2934	2763	2555	4.1	52	49	45	52
2.0	3668	3454	3194	3.7	80	75	70	59	2445	2302	2129	4.5	53	50	46	52
2.2	3111	2929	2708	4.0	82	77	71	60	2074	1952	1805	4.9	55	52	48	53
2.4	2676	2519	2330	4.3	84	79	73	60	1784	1680	1553	5.3	56	53	49	53
2.6	2330	2194	2028	4.6	86	81	75	61	1553	1462	1352	5.7	57	54	50	54
2.8	2050	1930	1784	5.0	88	83	76	61	1366	1286	1190	6.1	58	55	51	54
3.0	1819	1713	1584	5.3	89	84	78	61	1213	1142	1056	6.4	60	56	52	54
3.2	1627	1532	1416	5.6	91	86	79	62	1085	1021	944	6.8	61	57	53	55
3.4	1465	1379	1275	5.9	92	87	80	62	977	919	850	7.2	62	58	54	55
3.6	1327	1249	1155	6.2	94	88	82	62	885	833	770	7.5	63	59	54	55
3.8	1208	1138	1052	6.5	95	90	83	63	806	758	701	7.9	63	60	55	55
4.0	1106	1041	963	6.7	96	91	84	63	737	694	642	8.3	64	61	56	56
4.2	1016	957	885	7.0	98	92	85	63	678	638	590	8.6	65	61	57	56
4.4	938	883	816	7.3	99	93	86	63	625	589	544	9.0	66	62	57	56
4.6	868	817	756	7.6	100	94	87	64	579	545	504	9.3	67	63	58	56
4.8	807	759	702	7.9	101	95	88	64	538	506	468	9.7	68	64	59	56
5.0	752	708	654	8.2	102	96	89	64	501	472	436	10.0	68	64	59	57
5.2	702	661	611	8.5	104	98	90	64	468	441	408	10.4	69	65	60	57
5.4	658	619	573	8.7	105	99	91	64	439	413	382	10.7	70	66	61	57
5.6	618	582	538	9.0	106	99	92	64	412	388	359	11.1	70	66	61	57
5.8	581	547	506	9.3	107	100	93	65	388	365	337	11.4	71	67	62	57
6.0	548	516	477	9.6	108	101	94	65	366	344	318	11.7	72	68	62	58
6.2	518	488	451	9.9	109	102	95	65	345	325	301	12.1	72	68	63	58
6.4	490	462	427	10.1	110	103	95	65	327	308	285	12.4	73	69	64	58
6.6	465	438	405	10.4	110	104	96	65	310	292	270	12.7	74	69	64	58
6.8	442	416	384	10.7	111	105	97	65	294	277	256	13.1	74	70	65	58
7.0	420	395	366	10.9	112	106	98	66	280	264	244	13.4	75	70	65	58
7.2	400	377	348	11.2	113	106	98	66	267	251	232	13.7	75	71	66	58
7.4	381	359	332	11.5	114	107	99	66	254	239	221	14.1	76	72	66	59
7.6	364	343	317	11.8	115	108	100	66	243	229	211	14.4	77	72	67	59
7.8	348	328	303	12.0	116	109	101	66	232	219	202	14.7	77	73	67	59
8.0	333	314	290	12.3	116	110	101	66	222	209	193	15.0	78	73	68	59
8.2	319	301	278	12.5	117	110	102	66	213	200	185	15.4	78	74	68	59
8.4	306	288	267	12.8	118	111	103	66	204	192	178	15.7	79	74	68	59
8.6	294	277	256	13.1	119	112	103	67	196	185	171	16.0	79	74	69	59
8.8	283	266	246	13.3	119	112	104	67	188	177	164	16.3	80	75	69	59
9.0	272	256	237	13.6	120	113	105	67	181	171	158	16.7	80	75	70	60
9.2	262	246	228	13.9	121	114	105	67	174	164	152	17.0	81	76	70	60
9.4	252	237	220	14.1	122	114	106	67	168	158	146	17.3	81	76	71	60
9.6	243	229	212	14.4	122	115	106	67	162	153	141	17.6	81	77	71	60
9.8	235	221	204	14.6	123	116	107	67	156	147	136	17.9	82	77	71	60
10.0	227	213	197	14.9	124	116	108	67	151	142	132	18.2	82	78	72	60
10.5	208	196	181	15.5	125	118	109	68	139	131	121	19.0	83	79	73	60

Table 43: Stocking levels for western larch in the ABGR/TABR/LIBO2 plant association (full stocking = 302).

	UPPER MANAGEMENT ZONE (SDI = 227)								LOWER MANAGEMENT ZONE (SDI = 151)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	192	181	167	16.2	127	119	110	68	128	121	112	19.8	85	80	74	60
11.5	178	168	155	16.8	128	121	112	68	119	112	103	20.6	86	81	74	61
12.0	165	156	144	17.4	130	122	113	68	110	104	96	21.4	87	81	75	61
12.5	154	145	134	18.1	131	124	114	68	103	97	89	22.1	88	82	76	61
13.0	144	135	125	18.7	133	125	115	69	96	90	84	22.9	88	83	77	61
13.5	135	127	117	19.3	134	126	117	69	90	85	78	23.7	89	84	78	61
14.0	127	119	110	19.9	135	127	118	69	84	79	73	24.4	90	85	79	62
14.5	119	112	104	20.5	137	129	119	69	79	75	69	25.2	91	86	79	62
15.0	112	106	98	21.2	138	130	120	69	75	71	65	25.9	92	87	80	62
15.5	106	100	92	21.8	139	131	121	69	71	67	62	26.7	93	87	81	62
16.0	100	95	87	22.4	140	132	122	70	67	63	58	27.4	94	88	81	62
16.5	95	90	83	23.0	141	133	123	70	64	60	55	28.1	94	89	82	62
17.0	90	85	79	23.6	143	134	124	70	60	57	53	28.9	95	90	83	63
17.5	86	81	75	24.2	144	135	125	70	57	54	50	29.6	96	90	83	63
18.0	82	77	71	24.8	145	136	126	70	55	51	48	30.3	97	91	84	63
18.5	78	74	68	25.4	146	137	127	70	52	49	45	31.1	97	92	85	63
19.0	75	70	65	26.0	147	138	128	70	50	47	43	31.8	98	92	85	63
19.5	71	67	62	26.5	148	139	129	71	48	45	41	32.5	99	93	86	63
20.0	68	64	59	27.1	149	140	130	71	46	43	40	33.2	99	94	86	63
20.5	65	62	57	27.7	150	141	131	71	44	41	38	34.0	100	94	87	63
21.0	63	59	55	28.3	151	142	131	71	42	39	36	34.7	101	95	88	64
21.5	60	57	52	28.9	152	143	132	71	40	38	35	35.4	101	95	88	64
22.0	58	55	50	29.5	153	144	133	71	39	36	34	36.1	102	96	89	64
22.5	56	52	49	30.0	154	145	134	71	37	35	32	36.8	103	97	89	64
23.0	54	50	47	30.6	155	146	135	71	36	34	31	37.5	103	97	90	64
23.5	52	49	45	31.2	156	147	136	71	34	32	30	38.2	104	98	90	64
24.0	50	47	43	31.8	157	147	136	72	33	31	29	38.9	104	98	91	64
24.5	48	45	42	32.3	157	148	137	72	32	30	28	39.6	105	99	91	64
25.0	46	44	40	32.9	158	149	138	72	31	29	27	40.3	106	99	92	64
25.5	45	42	39	33.5	159	150	139	72	30	28	26	41.0	106	100	92	65
26.0	43	41	38	34.1	160	151	139	72	29	27	25	41.7	107	100	93	65
26.5	42	40	37	34.6	161	151	140	72	28	26	24	42.4	107	101	93	65
27.0	41	38	35	35.2	162	152	141	72	27	26	24	43.1	108	101	94	65
27.5	39	37	34	35.7	162	153	141	72	26	25	23	43.8	108	102	94	65
28.0	38	36	33	36.3	163	154	142	72	25	24	22	44.5	109	102	95	65
28.5	37	35	32	36.9	164	154	143	72	25	23	21	45.1	109	103	95	65
29.0	36	34	31	37.4	165	155	143	72	24	23	21	45.8	110	103	96	65
30.0	34	32	29	38.5	166	157	145	73	23	21	20	47.2	111	104	96	65

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 44: Stocking levels for Engelmann spruce in the ABGR/TABR/LIBO2 plant association (full stocking = 299).

	UPPER MANAGEMENT ZONE (SDI = 224)								LOWER MANAGEMENT ZONE (SDI = 150)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	11993	11292	10442	2.0	65	62	57	68	7996	7528	6961	2.5	44	41	38	61
1.2	8749	8237	7617	2.4	69	65	60	69	5833	5491	5078	2.9	46	43	40	62
1.4	6701	6309	5834	2.7	72	67	62	69	4467	4206	3889	3.4	48	45	42	62
1.6	5319	5008	4631	3.1	74	70	65	70	3546	3338	3087	3.8	50	47	43	63
1.8	4338	4085	3777	3.4	77	72	67	70	2892	2723	2518	4.2	51	48	44	63
2.0	3615	3404	3148	3.7	79	74	69	71	2410	2269	2098	4.6	53	50	46	64
2.2	3066	2887	2669	4.1	81	76	70	71	2044	1924	1779	5.0	54	51	47	64
2.4	2637	2483	2296	4.4	83	78	72	72	1758	1655	1531	5.3	55	52	48	65
2.6	2296	2162	1999	4.7	85	80	74	72	1531	1441	1333	5.7	56	53	49	65
2.8	2020	1902	1759	5.0	86	81	75	72	1347	1268	1172	6.1	58	54	50	65
3.0	1793	1688	1561	5.3	88	83	77	73	1195	1125	1041	6.5	59	55	51	66
3.2	1603	1510	1396	5.6	90	84	78	73	1069	1006	931	6.9	60	56	52	66
3.4	1444	1359	1257	5.9	91	86	79	73	962	906	838	7.2	61	57	53	66
3.6	1308	1231	1139	6.2	92	87	80	74	872	821	759	7.6	62	58	54	67
3.8	1191	1121	1037	6.5	94	88	82	74	794	748	691	8.0	63	59	54	67
4.0	1090	1026	949	6.8	95	90	83	74	727	684	633	8.3	63	60	55	67
4.2	1002	943	872	7.1	96	91	84	74	668	629	581	8.7	64	60	56	67
4.4	924	870	805	7.4	98	92	85	75	616	580	536	9.0	65	61	57	68
4.6	856	806	745	7.7	99	93	86	75	571	537	497	9.4	66	62	57	68
4.8	795	749	692	8.0	100	94	87	75	530	499	461	9.7	67	63	58	68
5.0	741	698	645	8.2	101	95	88	75	494	465	430	10.1	67	63	59	68
5.2	692	652	603	8.5	102	96	89	75	461	434	402	10.4	68	64	59	68
5.4	648	611	565	8.8	103	97	90	76	432	407	376	10.8	69	65	60	69
5.6	609	573	530	9.1	104	98	91	76	406	382	353	11.1	69	65	60	69
5.8	573	540	499	9.4	105	99	92	76	382	360	333	11.5	70	66	61	69
6.0	540	509	471	9.6	106	100	92	76	360	339	314	11.8	71	67	62	69
6.2	511	481	445	9.9	107	101	93	76	340	321	296	12.2	71	67	62	69
6.4	483	455	421	10.2	108	102	94	76	322	303	281	12.5	72	68	63	69
6.6	458	431	399	10.5	109	103	95	77	306	288	266	12.8	73	68	63	69
6.8	435	410	379	10.8	110	103	96	77	290	273	253	13.2	73	69	64	70
7.0	414	390	360	11.0	111	104	96	77	276	260	240	13.5	74	69	64	70
7.2	394	371	343	11.3	111	105	97	77	263	247	229	13.8	74	70	65	70
7.4	376	354	327	11.6	112	106	98	77	251	236	218	14.2	75	70	65	70
7.6	359	338	313	11.8	113	106	98	77	239	225	208	14.5	75	71	66	70
7.8	343	323	299	12.1	114	107	99	77	229	215	199	14.8	76	71	66	70
8.0	329	309	286	12.4	115	108	100	77	219	206	191	15.2	76	72	67	70
8.2	315	296	274	12.6	115	109	101	78	210	198	183	15.5	77	72	67	70
8.4	302	284	263	12.9	116	109	101	78	201	190	175	15.8	77	73	67	71
8.6	290	273	252	13.2	117	110	102	78	193	182	168	16.1	78	73	68	71
8.8	279	262	243	13.4	118	111	102	78	186	175	162	16.5	78	74	68	71
9.0	268	252	233	13.7	118	111	103	78	179	168	156	16.8	79	74	69	71
9.2	258	243	225	14.0	119	112	104	78	172	162	150	17.1	79	75	69	71
9.4	249	234	216	14.2	120	113	104	78	166	156	144	17.4	80	75	70	71
9.6	240	226	209	14.5	120	113	105	78	160	150	139	17.7	80	76	70	71
9.8	231	218	201	14.7	121	114	105	78	154	145	134	18.1	81	76	70	71
10.0	223	210	194	15.0	122	115	106	78	149	140	130	18.4	81	76	71	71
10.5	205	193	179	15.7	123	116	107	79	137	129	119	19.2	82	77	72	72

Table 44: Stocking levels for Engelmann spruce in the ABGR/TABR/LIBO2 plant association (full stocking = 299).

	UPPER MANAGEMENT ZONE (SDI = 224)								LOWER MANAGEMENT ZONE (SDI = 150)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	189	178	165	16.3	125	118	109	79	126	119	110	20.0	83	78	73	72
11.5	175	165	153	16.9	126	119	110	79	117	110	102	20.7	84	79	73	72
12.0	163	153	142	17.6	128	120	111	79	109	102	95	21.5	85	80	74	72
12.5	152	143	132	18.2	129	122	113	80	101	95	88	22.3	86	81	75	72
13.0	142	134	123	18.8	131	123	114	80	95	89	82	23.1	87	82	76	73
13.5	133	125	116	19.5	132	124	115	80	89	83	77	23.8	88	83	77	73
14.0	125	117	109	20.1	133	126	116	80	83	78	72	24.6	89	84	77	73
14.5	117	111	102	20.7	135	127	117	80	78	74	68	25.3	90	85	78	73
15.0	111	104	96	21.3	136	128	118	80	74	70	64	26.1	91	85	79	73
15.5	105	99	91	21.9	137	129	119	81	70	66	61	26.9	91	86	80	73
16.0	99	93	86	22.5	138	130	120	81	66	62	57	27.6	92	87	80	74
16.5	94	88	82	23.1	139	131	121	81	63	59	55	28.3	93	88	81	74
17.0	89	84	78	23.7	141	132	122	81	59	56	52	29.1	94	88	82	74
17.5	85	80	74	24.4	142	133	123	81	57	53	49	29.8	94	89	82	74
18.0	81	76	70	25.0	143	134	124	81	54	51	47	30.6	95	90	83	74
18.5	77	73	67	25.6	144	135	125	81	51	48	45	31.3	96	90	83	74
19.0	74	69	64	26.1	145	136	126	81	49	46	43	32.0	97	91	84	74
19.5	70	66	61	26.7	146	137	127	82	47	44	41	32.8	97	92	85	75
20.0	67	63	59	27.3	147	138	128	82	45	42	39	33.5	98	92	85	75
20.5	65	61	56	27.9	148	139	129	82	43	40	37	34.2	99	93	86	75
21.0	62	58	54	28.5	149	140	130	82	41	39	36	34.9	99	93	86	75
21.5	59	56	52	29.1	150	141	130	82	40	37	34	35.6	100	94	87	75
22.0	57	54	50	29.7	151	142	131	82	38	36	33	36.4	100	95	87	75
22.5	55	52	48	30.3	152	143	132	82	37	34	32	37.1	101	95	88	75
23.0	53	50	46	30.8	153	144	133	82	35	33	31	37.8	102	96	89	75
23.5	51	48	44	31.4	153	144	134	82	34	32	30	38.5	102	96	89	75
24.0	49	46	43	32.0	154	145	134	83	33	31	29	39.2	103	97	90	76
24.5	47	45	41	32.6	155	146	135	83	32	30	28	39.9	103	97	90	76
25.0	46	43	40	33.2	156	147	136	83	31	29	27	40.6	104	98	91	76
25.5	44	42	38	33.7	157	148	137	83	29	28	26	41.3	105	98	91	76
26.0	43	40	37	34.3	158	148	137	83	29	27	25	42.0	105	99	92	76
26.5	41	39	36	34.9	158	149	138	83	28	26	24	42.7	106	99	92	76
27.0	40	38	35	35.4	159	150	139	83	27	25	23	43.4	106	100	92	76
27.5	39	37	34	36.0	160	151	139	83	26	24	23	44.1	107	100	93	76
28.0	38	35	33	36.6	161	151	140	83	25	24	22	44.8	107	101	93	76
28.5	36	34	32	37.1	162	152	141	83	24	23	21	45.5	108	101	94	76
29.0	35	33	31	37.7	162	153	141	83	24	22	21	46.2	108	102	94	76
30.0	33	31	29	38.8	164	154	143	84	22	21	19	47.5	109	103	95	77

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 45: Stocking levels for grand fir in the ABGR/TABR/LIBO2 plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22524	21206	19609	1.5	123	116	107	80	15016	14137	13073	1.8	82	77	71	73
1.2	16431	15469	14304	1.7	129	121	112	81	10954	10313	9536	2.1	86	81	75	74
1.4	12584	11848	10956	2.0	135	127	117	82	8390	7899	7304	2.4	90	84	78	75
1.6	9989	9404	8696	2.2	139	131	121	83	6659	6270	5797	2.7	93	88	81	75
1.8	8147	7671	7093	2.5	144	136	125	83	5432	5114	4729	3.0	96	90	84	76
2.0	6790	6393	5911	2.7	148	139	129	84	4527	4262	3941	3.3	99	93	86	77
2.2	5758	5421	5013	3.0	152	143	132	84	3838	3614	3342	3.6	101	95	88	77
2.4	4953	4663	4312	3.2	156	147	135	85	3302	3109	2875	3.9	104	98	90	77
2.6	4313	4060	3755	3.4	159	150	138	85	2875	2707	2503	4.2	106	100	92	78
2.8	3794	3572	3303	3.6	162	153	141	85	2529	2381	2202	4.5	108	102	94	78
3.0	3367	3170	2931	3.9	165	156	144	86	2245	2113	1954	4.7	110	104	96	78
3.2	3011	2835	2621	4.1	168	158	146	86	2007	1890	1748	5.0	112	106	98	79
3.4	2711	2553	2360	4.3	171	161	149	86	1808	1702	1574	5.3	114	107	99	79
3.6	2456	2312	2138	4.5	174	163	151	87	1637	1542	1425	5.5	116	109	101	79
3.8	2237	2106	1947	4.7	176	166	153	87	1491	1404	1298	5.8	117	111	102	80
4.0	2047	1927	1782	5.0	179	168	156	87	1365	1285	1188	6.1	119	112	104	80
4.2	1881	1771	1638	5.2	181	170	158	87	1254	1181	1092	6.3	121	114	105	80
4.4	1736	1634	1511	5.4	183	173	160	88	1157	1089	1007	6.6	122	115	106	80
4.6	1607	1513	1399	5.6	185	175	161	88	1071	1009	933	6.9	124	116	108	81
4.8	1493	1406	1300	5.8	188	177	163	88	995	937	867	7.1	125	118	109	81
5.0	1391	1310	1211	6.0	190	179	165	88	928	873	808	7.4	126	119	110	81
5.2	1300	1224	1132	6.2	192	181	167	88	867	816	755	7.6	128	120	111	81
5.4	1218	1147	1060	6.4	194	182	169	89	812	764	707	7.9	129	122	112	81
5.6	1144	1077	996	6.6	196	184	170	89	762	718	664	8.1	130	123	114	81
5.8	1076	1013	937	6.8	197	186	172	89	717	676	625	8.4	132	124	115	82
6.0	1015	956	884	7.0	199	188	173	89	677	637	589	8.6	133	125	116	82
6.2	959	903	835	7.2	201	189	175	89	639	602	557	8.9	134	126	117	82
6.4	908	855	790	7.4	203	191	177	89	605	570	527	9.1	135	127	118	82
6.6	861	810	749	7.6	204	193	178	90	574	540	500	9.4	136	128	119	82
6.8	817	770	712	7.8	206	194	179	90	545	513	474	9.6	137	129	120	82
7.0	777	732	677	8.0	208	196	181	90	518	488	451	9.9	139	130	121	83
7.2	740	697	645	8.2	209	197	182	90	494	465	430	10.1	140	131	121	83
7.4	706	665	615	8.4	211	199	184	90	471	443	410	10.3	141	132	122	83
7.6	674	635	587	8.6	212	200	185	90	450	423	391	10.6	142	133	123	83
7.8	645	607	561	8.8	214	201	186	90	430	405	374	10.8	143	134	124	83
8.0	617	581	537	9.0	215	203	188	90	411	387	358	11.1	144	135	125	83
8.2	591	557	515	9.2	217	204	189	91	394	371	343	11.3	145	136	126	83
8.4	567	534	494	9.4	218	205	190	91	378	356	329	11.5	145	137	127	83
8.6	544	513	474	9.6	220	207	191	91	363	342	316	11.8	146	138	127	84
8.8	523	493	456	9.8	221	208	192	91	349	328	304	12.0	147	139	128	84
9.0	503	474	438	10.0	222	209	194	91	336	316	292	12.2	148	140	129	84
9.2	484	456	422	10.2	224	211	195	91	323	304	281	12.5	149	140	130	84
9.4	467	439	406	10.4	225	212	196	91	311	293	271	12.7	150	141	131	84
9.6	450	424	392	10.6	226	213	197	91	300	283	261	12.9	151	142	131	84
9.8	434	409	378	10.8	228	214	198	91	290	273	252	13.2	152	143	132	84
10.0	419	395	365	11.0	229	215	199	92	280	263	243	13.4	153	144	133	84
10.5	385	363	336	11.4	232	218	202	92	257	242	224	14.0	155	145	135	85

Table 45: Stocking levels for grand fir in the ABGR/TABR/LIBO2 plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	356	335	310	11.9	235	221	204	92	237	223	206	14.6	156	147	136	85
11.5	329	310	287	12.4	238	224	207	92	220	207	191	15.1	158	149	138	85
12.0	306	288	266	12.8	240	226	209	92	204	192	178	15.7	160	151	139	85
12.5	285	268	248	13.3	243	229	212	93	190	179	165	16.3	162	152	141	85
13.0	266	251	232	13.7	246	231	214	93	178	167	155	16.8	164	154	143	86
13.5	250	235	217	14.2	248	234	216	93	166	157	145	17.4	165	156	144	86
14.0	234	221	204	14.7	251	236	218	93	156	147	136	17.9	167	157	145	86
14.5	221	208	192	15.1	253	238	220	93	147	138	128	18.5	169	159	147	86
15.0	208	196	181	15.6	255	240	222	94	139	131	121	19.0	170	160	148	86
15.5	197	185	171	16.0	257	242	224	94	131	123	114	19.6	172	162	149	86
16.0	186	175	162	16.4	260	245	226	94	124	117	108	20.1	173	163	151	87
16.5	176	166	154	16.9	262	247	228	94	118	111	102	20.7	175	164	152	87
17.0	167	158	146	17.3	264	249	230	94	112	105	97	21.2	176	166	153	87
17.5	159	150	139	17.8	266	250	232	94	106	100	92	21.8	177	167	154	87
18.0	152	143	132	18.2	268	252	233	94	101	95	88	22.3	179	168	156	87
18.5	145	136	126	18.6	270	254	235	95	96	91	84	22.8	180	170	157	87
19.0	138	130	120	19.1	272	256	237	95	92	87	80	23.4	181	171	158	87
19.5	132	124	115	19.5	274	258	239	95	88	83	77	23.9	183	172	159	88
20.0	126	119	110	19.9	276	260	240	95	84	79	73	24.4	184	173	160	88
20.5	121	114	105	20.4	278	261	242	95	81	76	70	25.0	185	174	161	88
21.0	116	109	101	20.8	279	263	243	95	77	73	67	25.5	186	175	162	88
21.5	112	105	97	21.2	281	265	245	95	74	70	65	26.0	188	177	163	88
22.0	107	101	93	21.7	283	266	246	95	71	67	62	26.5	189	178	164	88
22.5	103	97	90	22.1	285	268	248	96	69	65	60	27.0	190	179	165	88
23.0	99	93	86	22.5	286	270	249	96	66	62	58	27.6	191	180	166	88
23.5	96	90	83	22.9	288	271	251	96	64	60	56	28.1	192	181	167	88
24.0	92	87	80	23.4	290	273	252	96	61	58	54	28.6	193	182	168	89
24.5	89	84	77	23.8	291	274	254	96	59	56	52	29.1	194	183	169	89
25.0	86	81	75	24.2	293	276	255	96	57	54	50	29.6	195	184	170	89
25.5	83	78	72	24.6	295	277	256	96	55	52	48	30.1	196	185	171	89
26.0	80	76	70	25.0	296	279	258	96	54	50	47	30.7	197	186	172	89
26.5	78	73	68	25.4	298	280	259	96	52	49	45	31.2	198	187	173	89
27.0	75	71	65	25.9	299	282	260	96	50	47	44	31.7	199	188	174	89
27.5	73	69	63	26.3	301	283	262	96	49	46	42	32.2	200	189	174	89
28.0	71	67	61	26.7	302	284	263	97	47	44	41	32.7	201	190	175	89
28.5	69	65	60	27.1	304	286	264	97	46	43	40	33.2	202	191	176	89
29.0	66	63	58	27.5	305	287	265	97	44	42	39	33.7	203	191	177	89
30.0	63	59	55	28.3	308	290	268	97	42	39	36	34.7	205	193	179	90

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 46: Stocking levels for Douglas-fir in the ABGR/CLUN plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9249	8708	8053	2.3	50	47	44	62	6166	5806	5368	2.9	34	32	29	55
1.2	7023	6613	6115	2.7	55	52	48	63	4682	4408	4076	3.3	37	35	32	57
1.4	5565	5239	4845	3.0	59	56	52	64	3710	3493	3230	3.7	40	37	35	58
1.6	4549	4283	3960	3.3	64	60	55	65	3033	2855	2640	4.1	42	40	37	59
1.8	3808	3585	3315	3.6	67	63	59	66	2538	2390	2210	4.5	45	42	39	60
2.0	3248	3058	2827	3.9	71	67	62	67	2165	2038	1885	4.8	47	44	41	61
2.2	2812	2648	2448	4.2	74	70	65	68	1875	1765	1632	5.2	49	47	43	61
2.4	2466	2322	2147	4.5	77	73	67	68	1644	1548	1431	5.5	52	49	45	62
2.6	2185	2057	1902	4.8	81	76	70	69	1457	1372	1268	5.9	54	51	47	63
2.8	1954	1840	1701	5.1	84	79	73	70	1303	1226	1134	6.2	56	52	48	63
3.0	1761	1658	1533	5.3	86	81	75	70	1174	1105	1022	6.5	58	54	50	64
3.2	1597	1504	1390	5.6	89	84	78	71	1065	1002	927	6.9	59	56	52	64
3.4	1457	1372	1269	5.9	92	87	80	71	972	915	846	7.2	61	58	53	65
3.6	1337	1259	1164	6.1	94	89	82	72	891	839	776	7.5	63	59	55	65
3.8	1232	1160	1073	6.4	97	91	84	72	821	773	715	7.8	65	61	56	66
4.0	1140	1074	993	6.6	100	94	87	73	760	716	662	8.1	66	62	58	66
4.2	1059	997	922	6.9	102	96	89	73	706	665	615	8.4	68	64	59	66
4.4	987	930	860	7.1	104	98	91	73	658	620	573	8.7	70	65	61	67
4.6	923	869	804	7.4	107	100	93	74	616	580	536	9.0	71	67	62	67
4.8	866	815	754	7.6	109	102	95	74	577	543	503	9.3	73	68	63	67
5.0	814	766	709	7.9	111	105	97	74	543	511	472	9.6	74	70	64	68
5.2	767	722	668	8.1	113	107	99	75	512	482	445	9.9	75	71	66	68
5.4	725	682	631	8.3	115	109	100	75	483	455	421	10.2	77	72	67	68
5.6	686	646	597	8.6	117	110	102	75	457	431	398	10.5	78	74	68	69
5.8	651	613	566	8.8	119	112	104	75	434	408	378	10.8	80	75	69	69
6.0	618	582	538	9.0	121	114	106	76	412	388	359	11.0	81	76	70	69
6.2	588	554	512	9.2	123	116	107	76	392	369	341	11.3	82	77	72	69
6.4	561	528	488	9.5	125	118	109	76	374	352	325	11.6	84	79	73	70
6.6	535	504	466	9.7	127	120	111	76	357	336	311	11.9	85	80	74	70
6.8	512	482	445	9.9	129	122	112	77	341	321	297	12.1	86	81	75	70
7.0	490	461	426	10.1	131	123	114	77	327	307	284	12.4	87	82	76	70
7.2	469	442	409	10.4	133	125	116	77	313	295	272	12.7	88	83	77	71
7.4	450	424	392	10.6	135	127	117	77	300	283	261	12.9	90	84	78	71
7.6	433	407	377	10.8	136	128	119	78	288	272	251	13.2	91	86	79	71
7.8	416	392	362	11.0	138	130	120	78	277	261	241	13.5	92	87	80	71
8.0	400	377	349	11.2	140	132	122	78	267	251	232	13.7	93	88	81	71
8.2	386	363	336	11.4	141	133	123	78	257	242	224	14.0	94	89	82	72
8.4	372	350	324	11.6	143	135	125	78	248	233	216	14.2	95	90	83	72
8.6	359	338	312	11.8	145	136	126	79	239	225	208	14.5	97	91	84	72
8.8	347	326	302	12.0	146	138	127	79	231	218	201	14.8	98	92	85	72
9.0	335	316	292	12.3	148	139	129	79	223	210	195	15.0	99	93	86	72
9.2	324	305	282	12.5	150	141	130	79	216	203	188	15.3	100	94	87	73
9.4	314	295	273	12.7	151	142	132	79	209	197	182	15.5	101	95	88	73
9.6	304	286	265	12.9	153	144	133	79	203	191	176	15.8	102	96	89	73
9.8	295	277	257	13.1	154	145	134	80	196	185	171	16.0	103	97	90	73
10.0	286	269	249	13.3	156	147	136	80	191	179	166	16.2	104	98	90	73
10.5	266	250	231	13.8	160	150	139	80	177	167	154	16.9	106	100	93	74
11.0	248	233	215	14.3	163	154	142	80	165	155	144	17.5	109	103	95	74

Table 46: Stocking levels for Douglas-fir in the ABGR/CLUN plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	231	218	202	14.7	167	157	145	81	154	145	134	18.1	111	105	97	74
12.0	217	204	189	15.2	170	160	148	81	145	136	126	18.6	114	107	99	75
12.5	204	192	178	15.7	174	164	151	81	136	128	118	19.2	116	109	101	75
13.0	192	181	167	16.2	177	167	154	82	128	121	112	19.8	118	111	103	75
13.5	182	171	158	16.6	181	170	157	82	121	114	105	20.4	120	113	105	76
14.0	172	162	150	17.1	184	173	160	82	115	108	100	20.9	123	115	107	76
14.5	163	154	142	17.6	187	176	163	83	109	102	95	21.5	125	117	109	76
15.0	155	146	135	18.0	190	179	166	83	103	97	90	22.1	127	119	110	76
15.5	147	139	128	18.5	193	182	168	83	98	93	86	22.6	129	121	112	77
16.0	141	132	122	18.9	196	185	171	83	94	88	82	23.2	131	123	114	77
16.5	134	126	117	19.4	199	188	173	84	89	84	78	23.7	133	125	116	77
17.0	128	121	112	19.8	202	190	176	84	86	81	74	24.3	135	127	117	77
17.5	123	116	107	20.2	205	193	179	84	82	77	71	24.8	137	129	119	78
18.0	118	111	102	20.7	208	196	181	84	78	74	68	25.3	139	131	121	78
18.5	113	106	98	21.1	211	198	183	85	75	71	66	25.9	140	132	122	78
19.0	108	102	94	21.5	214	201	186	85	72	68	63	26.4	142	134	124	78
19.5	104	98	91	22.0	216	204	188	85	70	65	61	26.9	144	136	126	78
20.0	100	94	87	22.4	219	206	191	85	67	63	58	27.4	146	137	127	79
20.5	97	91	84	22.8	222	209	193	85	64	61	56	27.9	148	139	129	79
21.0	93	88	81	23.2	224	211	195	86	62	59	54	28.4	149	141	130	79
21.5	90	85	78	23.6	227	214	197	86	60	56	52	29.0	151	142	132	79
22.0	87	82	76	24.1	229	216	200	86	58	55	50	29.5	153	144	133	79
22.5	84	79	73	24.5	232	218	202	86	56	53	49	30.0	155	146	135	80
23.0	81	77	71	24.9	234	221	204	86	54	51	47	30.5	156	147	136	80
23.5	79	74	68	25.3	237	223	206	86	52	49	46	31.0	158	149	138	80
24.0	76	72	66	25.7	239	225	208	87	51	48	44	31.5	160	150	139	80
24.5	74	70	64	26.1	242	228	211	87	49	46	43	32.0	161	152	140	80
25.0	72	67	62	26.5	244	230	213	87	48	45	42	32.5	163	153	142	80
25.5	70	65	61	26.9	247	232	215	87	46	44	40	32.9	164	155	143	81
26.0	68	64	59	27.3	249	234	217	87	45	42	39	33.4	166	156	145	81
26.5	66	62	57	27.7	251	237	219	87	44	41	38	33.9	168	158	146	81
27.0	64	60	56	28.1	254	239	221	88	43	40	37	34.4	169	159	147	81
27.5	62	58	54	28.5	256	241	223	88	41	39	36	34.9	171	161	149	81
28.0	60	57	53	28.9	258	243	225	88	40	38	35	35.3	172	162	150	81
28.5	59	55	51	29.3	260	245	227	88	39	37	34	35.8	174	163	151	81
29.0	57	54	50	29.6	263	247	229	88	38	36	33	36.3	175	165	152	82
30.0	54	51	47	30.4	267	251	233	88	36	34	32	37.2	178	168	155	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 47: Stocking levels for western larch in the ABGR/CLUN plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16520	15553	14382	1.7	90	85	78	62	11013	10369	9588	2.1	60	57	52	54
1.2	12051	11346	10492	2.0	95	89	82	63	8034	7564	6994	2.5	63	59	55	55
1.4	9230	8690	8036	2.3	99	93	86	63	6153	5793	5357	2.9	66	62	57	56
1.6	7326	6898	6378	2.6	102	96	89	64	4884	4598	4252	3.2	68	64	59	57
1.8	5976	5626	5202	2.9	106	99	92	64	3984	3751	3468	3.6	70	66	61	57
2.0	4980	4689	4336	3.2	109	102	95	65	3320	3126	2890	3.9	72	68	63	58
2.2	4223	3976	3676	3.5	111	105	97	65	2815	2651	2451	4.2	74	70	65	58
2.4	3633	3420	3163	3.7	114	107	99	66	2422	2280	2108	4.6	76	72	66	59
2.6	3163	2978	2754	4.0	117	110	102	66	2109	1985	1836	4.9	78	73	68	59
2.8	2782	2620	2422	4.3	119	112	104	67	1855	1746	1615	5.2	79	75	69	59
3.0	2469	2325	2150	4.5	121	114	106	67	1646	1550	1433	5.5	81	76	70	60
3.2	2208	2079	1923	4.8	123	116	107	67	1472	1386	1282	5.8	82	77	72	60
3.4	1989	1872	1731	5.0	125	118	109	68	1326	1248	1154	6.2	84	79	73	60
3.6	1801	1696	1568	5.3	127	120	111	68	1201	1131	1046	6.5	85	80	74	61
3.8	1641	1545	1428	5.5	129	122	112	68	1094	1030	952	6.8	86	81	75	61
4.0	1501	1413	1307	5.8	131	123	114	68	1001	942	871	7.1	87	82	76	61
4.2	1380	1299	1201	6.0	133	125	116	69	920	866	801	7.4	88	83	77	61
4.4	1273	1199	1108	6.3	134	127	117	69	849	799	739	7.7	90	84	78	62
4.6	1179	1110	1026	6.5	136	128	118	69	786	740	684	8.0	91	85	79	62
4.8	1095	1031	953	6.8	138	130	120	69	730	687	636	8.3	92	86	80	62
5.0	1020	961	888	7.0	139	131	121	69	680	640	592	8.6	93	87	81	62
5.2	953	898	830	7.3	141	132	122	70	636	598	553	8.9	94	88	82	62
5.4	893	841	778	7.5	142	134	124	70	595	561	518	9.2	95	89	82	63
5.6	839	790	730	7.7	143	135	125	70	559	526	487	9.5	96	90	83	63
5.8	789	743	687	8.0	145	136	126	70	526	495	458	9.8	97	91	84	63
6.0	744	701	648	8.2	146	138	127	70	496	467	432	10.1	97	92	85	63
6.2	703	662	612	8.5	147	139	128	70	469	441	408	10.4	98	93	86	63
6.4	666	627	580	8.7	149	140	129	71	444	418	386	10.6	99	93	86	63
6.6	631	594	550	8.9	150	141	131	71	421	396	366	10.9	100	94	87	63
6.8	599	564	522	9.2	151	142	132	71	400	376	348	11.2	101	95	88	64
7.0	570	537	496	9.4	152	143	133	71	380	358	331	11.5	102	96	88	64
7.2	543	511	473	9.6	154	145	134	71	362	341	315	11.8	102	96	89	64
7.4	518	488	451	9.9	155	146	135	71	345	325	301	12.1	103	97	90	64
7.6	495	466	431	10.1	156	147	136	71	330	310	287	12.4	104	98	90	64
7.8	473	445	412	10.3	157	148	137	72	315	297	274	12.6	105	98	91	64
8.0	453	426	394	10.5	158	149	138	72	302	284	263	12.9	105	99	92	64
8.2	434	408	378	10.8	159	150	138	72	289	272	252	13.2	106	100	92	65
8.4	416	392	362	11.0	160	151	139	72	277	261	241	13.5	107	100	93	65
8.6	399	376	348	11.2	161	152	140	72	266	251	232	13.7	107	101	93	65
8.8	384	361	334	11.4	162	153	141	72	256	241	223	14.0	108	102	94	65
9.0	369	348	321	11.7	163	154	142	72	246	232	214	14.3	109	102	95	65
9.2	355	335	309	11.9	164	154	143	72	237	223	206	14.6	109	103	95	65
9.4	342	322	298	12.1	165	155	144	73	228	215	199	14.8	110	104	96	65
9.6	330	311	287	12.3	166	156	144	73	220	207	192	15.1	111	104	96	65
9.8	319	300	277	12.6	167	157	145	73	212	200	185	15.4	111	105	97	65
10.0	308	290	268	12.8	168	158	146	73	205	193	179	15.7	112	105	97	66
10.5	283	266	246	13.3	170	160	148	73	188	177	164	16.3	113	107	99	66

Table 47: Stocking levels for western larch in the ABGR/CLUN plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	261	246	227	13.9	172	162	150	73	174	164	151	17.0	115	108	100	66
11.5	242	227	210	14.4	174	164	152	73	161	152	140	17.7	116	109	101	66
12.0	224	211	195	15.0	176	166	153	74	150	141	130	18.3	117	111	102	66
12.5	209	197	182	15.5	178	168	155	74	139	131	121	19.0	119	112	103	67
13.0	195	184	170	16.0	180	170	157	74	130	123	113	19.7	120	113	105	67
13.5	183	172	159	16.6	182	171	158	74	122	115	106	20.3	121	114	106	67
14.0	172	162	150	17.1	184	173	160	74	115	108	100	21.0	122	115	107	67
14.5	162	152	141	17.6	185	175	161	75	108	102	94	21.6	124	116	108	67
15.0	153	144	133	18.2	187	176	163	75	102	96	89	22.2	125	117	109	67
15.5	144	136	125	18.7	189	178	164	75	96	90	84	22.9	126	119	110	68
16.0	136	128	119	19.2	190	179	166	75	91	86	79	23.5	127	120	111	68
16.5	129	122	113	19.7	192	181	167	75	86	81	75	24.2	128	121	111	68
17.0	123	116	107	20.2	194	182	169	75	82	77	71	24.8	129	122	112	68
17.5	117	110	102	20.7	195	184	170	76	78	73	68	25.4	130	122	113	68
18.0	111	105	97	21.3	197	185	171	76	74	70	65	26.0	131	123	114	68
18.5	106	100	92	21.8	198	187	172	76	71	67	62	26.7	132	124	115	68
19.0	101	95	88	22.3	200	188	174	76	68	64	59	27.3	133	125	116	69
19.5	97	91	84	22.8	201	189	175	76	65	61	56	27.9	134	126	117	69
20.0	93	87	81	23.3	202	190	176	76	62	58	54	28.5	135	127	117	69
20.5	89	84	77	23.8	204	192	177	76	59	56	52	29.1	136	128	118	69
21.0	85	80	74	24.3	205	193	178	76	57	53	49	29.8	137	129	119	69
21.5	82	77	71	24.8	206	194	180	77	55	51	47	30.4	138	129	120	69
22.0	79	74	68	25.3	208	195	181	77	52	49	46	31.0	138	130	120	69
22.5	76	71	66	25.8	209	197	182	77	50	47	44	31.6	139	131	121	69
23.0	73	69	63	26.3	210	198	183	77	49	46	42	32.2	140	132	122	70
23.5	70	66	61	26.8	211	199	184	77	47	44	41	32.8	141	133	123	70
24.0	68	64	59	27.3	213	200	185	77	45	42	39	33.4	142	133	123	70
24.5	65	61	57	27.8	214	201	186	77	44	41	38	34.0	142	134	124	70
25.0	63	59	55	28.2	215	202	187	77	42	40	37	34.6	143	135	125	70
25.5	61	57	53	28.7	216	203	188	77	41	38	35	35.2	144	136	125	70
26.0	59	55	51	29.2	217	204	189	77	39	37	34	35.8	145	136	126	70
26.5	57	54	50	29.7	218	206	190	78	38	36	33	36.4	146	137	127	70
27.0	55	52	48	30.2	219	207	191	78	37	35	32	37.0	146	138	127	70
27.5	53	50	47	30.7	220	208	192	78	36	34	31	37.6	147	138	128	70
28.0	52	49	45	31.2	222	209	193	78	35	33	30	38.2	148	139	129	71
28.5	50	47	44	31.6	223	210	194	78	33	32	29	38.7	148	140	129	71
29.0	49	46	42	32.1	224	211	195	78	33	31	28	39.3	149	140	130	71
30.0	46	43	40	33.1	226	213	197	78	31	29	27	40.5	150	142	131	71

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 48: Stocking levels for lodgepole pine in the ABGR/CLUN plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59

Table 48: Stocking levels for lodgepole pine in the ABGR/CLUN plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 49: Stocking levels for Engelmann spruce in the ABGR/CLUN plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	18813	17713	16379	1.6	103	97	89	75	12542	11808	10919	2.0	68	64	60	68
1.2	13724	12921	11948	1.9	108	101	94	76	9149	8614	7965	2.3	72	68	63	69
1.4	10511	9897	9151	2.2	112	106	98	77	7008	6598	6101	2.7	75	71	65	70
1.6	8343	7855	7264	2.5	116	110	101	78	5562	5237	4842	3.0	78	73	68	71
1.8	6805	6407	5925	2.7	120	113	105	78	4537	4271	3950	3.3	80	75	70	71
2.0	5671	5340	4937	3.0	124	116	108	79	3781	3560	3292	3.6	82	78	72	72
2.2	4809	4528	4187	3.2	127	120	111	79	3206	3019	2791	4.0	85	80	74	72
2.4	4137	3895	3602	3.5	130	122	113	80	2758	2597	2401	4.3	87	82	75	73
2.6	3602	3391	3136	3.7	133	125	116	80	2401	2261	2091	4.6	89	83	77	73
2.8	3169	2983	2759	4.0	135	128	118	80	2112	1989	1839	4.9	90	85	79	73
3.0	2812	2648	2448	4.2	138	130	120	81	1875	1765	1632	5.2	92	87	80	74
3.2	2515	2368	2190	4.5	140	132	122	81	1677	1579	1460	5.5	94	88	82	74
3.4	2265	2132	1972	4.7	143	134	124	81	1510	1421	1314	5.8	95	90	83	74
3.6	2051	1931	1786	5.0	145	137	126	82	1368	1288	1191	6.1	97	91	84	74
3.8	1868	1759	1627	5.2	147	139	128	82	1246	1173	1084	6.4	98	92	85	75
4.0	1710	1610	1488	5.4	149	140	130	82	1140	1073	992	6.6	99	94	87	75
4.2	1571	1479	1368	5.7	151	142	132	82	1047	986	912	6.9	101	95	88	75
4.4	1450	1365	1262	5.9	153	144	133	82	966	910	841	7.2	102	96	89	75
4.6	1342	1264	1169	6.1	155	146	135	83	895	843	779	7.5	103	97	90	76
4.8	1247	1174	1086	6.4	157	148	136	83	831	783	724	7.8	104	98	91	76
5.0	1162	1094	1012	6.6	158	149	138	83	775	729	674	8.1	106	99	92	76
5.2	1086	1022	945	6.8	160	151	139	83	724	682	630	8.3	107	101	93	76
5.4	1017	958	886	7.0	162	152	141	83	678	638	590	8.6	108	102	94	76
5.6	955	899	832	7.3	163	154	142	84	637	600	554	8.9	109	103	95	77
5.8	899	846	783	7.5	165	155	144	84	599	564	522	9.2	110	104	96	77
6.0	848	798	738	7.7	166	157	145	84	565	532	492	9.4	111	104	97	77
6.2	801	754	697	7.9	168	158	146	84	534	503	465	9.7	112	105	97	77
6.4	758	714	660	8.1	169	159	147	84	505	476	440	10.0	113	106	98	77
6.6	719	677	626	8.4	171	161	149	84	479	451	417	10.2	114	107	99	77
6.8	683	643	594	8.6	172	162	150	85	455	429	396	10.5	115	108	100	77
7.0	649	611	565	8.8	174	163	151	85	433	408	377	10.8	116	109	101	78
7.2	618	582	538	9.0	175	165	152	85	412	388	359	11.0	117	110	101	78
7.4	590	555	513	9.2	176	166	153	85	393	370	342	11.3	117	111	102	78
7.6	563	530	490	9.5	177	167	154	85	375	353	327	11.6	118	111	103	78
7.8	538	507	469	9.7	179	168	156	85	359	338	313	11.8	119	112	104	78
8.0	515	485	449	9.9	180	169	157	85	344	323	299	12.1	120	113	104	78
8.2	494	465	430	10.1	181	171	158	85	329	310	287	12.4	121	114	105	78
8.4	474	446	412	10.3	182	172	159	86	316	297	275	12.6	122	114	106	78
8.6	455	428	396	10.5	183	173	160	86	303	285	264	12.9	122	115	106	79
8.8	437	411	380	10.7	185	174	161	86	291	274	254	13.1	123	116	107	79
9.0	420	396	366	10.9	186	175	162	86	280	264	244	13.4	124	117	108	79
9.2	405	381	352	11.1	187	176	163	86	270	254	235	13.7	125	117	108	79
9.4	390	367	339	11.4	188	177	164	86	260	245	226	13.9	125	118	109	79
9.6	376	354	327	11.6	189	178	165	86	251	236	218	14.2	126	119	110	79
9.8	363	342	316	11.8	190	179	165	86	242	228	211	14.4	127	119	110	79
10.0	350	330	305	12.0	191	180	166	86	234	220	203	14.7	127	120	111	79
10.5	322	303	280	12.5	194	182	169	87	215	202	187	15.3	129	122	112	79

Table 49: Stocking levels for Engelmann spruce in the ABGR/CLUN plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	297	280	259	13.0	196	185	171	87	198	186	172	15.9	131	123	114	80
11.5	275	259	239	13.5	198	187	173	87	183	173	160	16.6	132	125	115	80
12.0	256	241	222	14.0	201	189	175	87	170	160	148	17.2	134	126	116	80
12.5	238	224	207	14.5	203	191	177	87	159	149	138	17.8	135	127	118	80
13.0	223	209	194	15.0	205	193	179	88	148	140	129	18.4	137	129	119	80
13.5	208	196	181	15.5	207	195	180	88	139	131	121	19.0	138	130	120	81
14.0	196	184	170	16.0	209	197	182	88	130	123	114	19.6	139	131	121	81
14.5	184	173	160	16.5	211	199	184	88	123	116	107	20.2	141	133	123	81
15.0	174	164	151	17.0	213	201	186	88	116	109	101	20.8	142	134	124	81
15.5	164	155	143	17.5	215	202	187	88	109	103	95	21.4	143	135	125	81
16.0	155	146	135	18.0	217	204	189	89	104	98	90	22.0	145	136	126	81
16.5	147	139	128	18.5	219	206	190	89	98	92	85	22.6	146	137	127	82
17.0	140	132	122	19.0	221	208	192	89	93	88	81	23.2	147	138	128	82
17.5	133	125	116	19.4	222	209	193	89	89	84	77	23.8	148	139	129	82
18.0	127	119	110	19.9	224	211	195	89	84	80	74	24.4	149	141	130	82
18.5	121	114	105	20.4	226	212	196	89	81	76	70	25.0	150	142	131	82
19.0	115	109	100	20.9	227	214	198	89	77	72	67	25.6	151	143	132	82
19.5	110	104	96	21.4	229	215	199	89	74	69	64	26.2	153	144	133	82
20.0	106	99	92	21.8	230	217	201	90	70	66	61	26.7	154	145	134	83
20.5	101	95	88	22.3	232	218	202	90	67	64	59	27.3	155	146	135	83
21.0	97	91	84	22.8	233	220	203	90	65	61	56	27.9	156	147	135	83
21.5	93	88	81	23.2	235	221	205	90	62	58	54	28.5	157	147	136	83
22.0	90	84	78	23.7	236	223	206	90	60	56	52	29.0	158	148	137	83
22.5	86	81	75	24.2	238	224	207	90	57	54	50	29.6	159	149	138	83
23.0	83	78	72	24.6	239	225	208	90	55	52	48	30.2	160	150	139	83
23.5	80	75	70	25.1	241	227	210	90	53	50	46	30.7	160	151	140	83
24.0	77	73	67	25.6	242	228	211	90	51	48	45	31.3	161	152	140	83
24.5	74	70	65	26.0	243	229	212	91	50	47	43	31.9	162	153	141	83
25.0	72	68	62	26.5	245	230	213	91	48	45	42	32.4	163	154	142	84
25.5	69	65	60	26.9	246	232	214	91	46	44	40	33.0	164	154	143	84
26.0	67	63	58	27.4	247	233	215	91	45	42	39	33.5	165	155	144	84
26.5	65	61	57	27.8	249	234	216	91	43	41	38	34.1	166	156	144	84
27.0	63	59	55	28.3	250	235	218	91	42	39	36	34.7	167	157	145	84
27.5	61	57	53	28.7	251	236	219	91	41	38	35	35.2	167	158	146	84
28.0	59	56	51	29.2	252	238	220	91	39	37	34	35.8	168	158	146	84
28.5	57	54	50	29.6	254	239	221	91	38	36	33	36.3	169	159	147	84
29.0	56	52	48	30.1	255	240	222	91	37	35	32	36.9	170	160	148	84
30.0	52	49	46	31.0	257	242	224	92	35	33	30	38.0	171	161	149	84

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 50: Stocking levels for grand fir in the ABGR/CLUN plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22524	21206	19609	1.5	123	116	107	80	15016	14137	13073	1.8	82	77	71	73
1.2	16431	15469	14304	1.7	129	121	112	81	10954	10313	9536	2.1	86	81	75	74
1.4	12584	11848	10956	2.0	135	127	117	82	8390	7899	7304	2.4	90	84	78	75
1.6	9989	9404	8696	2.2	139	131	121	83	6659	6270	5797	2.7	93	88	81	75
1.8	8147	7671	7093	2.5	144	136	125	83	5432	5114	4729	3.0	96	90	84	76
2.0	6790	6393	5911	2.7	148	139	129	84	4527	4262	3941	3.3	99	93	86	77
2.2	5758	5421	5013	3.0	152	143	132	84	3838	3614	3342	3.6	101	95	88	77
2.4	4953	4663	4312	3.2	156	147	135	85	3302	3109	2875	3.9	104	98	90	77
2.6	4313	4060	3755	3.4	159	150	138	85	2875	2707	2503	4.2	106	100	92	78
2.8	3794	3572	3303	3.6	162	153	141	85	2529	2381	2202	4.5	108	102	94	78
3.0	3367	3170	2931	3.9	165	156	144	86	2245	2113	1954	4.7	110	104	96	78
3.2	3011	2835	2621	4.1	168	158	146	86	2007	1890	1748	5.0	112	106	98	79
3.4	2711	2553	2360	4.3	171	161	149	86	1808	1702	1574	5.3	114	107	99	79
3.6	2456	2312	2138	4.5	174	163	151	87	1637	1542	1425	5.5	116	109	101	79
3.8	2237	2106	1947	4.7	176	166	153	87	1491	1404	1298	5.8	117	111	102	80
4.0	2047	1927	1782	5.0	179	168	156	87	1365	1285	1188	6.1	119	112	104	80
4.2	1881	1771	1638	5.2	181	170	158	87	1254	1181	1092	6.3	121	114	105	80
4.4	1736	1634	1511	5.4	183	173	160	88	1157	1089	1007	6.6	122	115	106	80
4.6	1607	1513	1399	5.6	185	175	161	88	1071	1009	933	6.9	124	116	108	81
4.8	1493	1406	1300	5.8	188	177	163	88	995	937	867	7.1	125	118	109	81
5.0	1391	1310	1211	6.0	190	179	165	88	928	873	808	7.4	126	119	110	81
5.2	1300	1224	1132	6.2	192	181	167	88	867	816	755	7.6	128	120	111	81
5.4	1218	1147	1060	6.4	194	182	169	89	812	764	707	7.9	129	122	112	81
5.6	1144	1077	996	6.6	196	184	170	89	762	718	664	8.1	130	123	114	81
5.8	1076	1013	937	6.8	197	186	172	89	717	676	625	8.4	132	124	115	82
6.0	1015	956	884	7.0	199	188	173	89	677	637	589	8.6	133	125	116	82
6.2	959	903	835	7.2	201	189	175	89	639	602	557	8.9	134	126	117	82
6.4	908	855	790	7.4	203	191	177	89	605	570	527	9.1	135	127	118	82
6.6	861	810	749	7.6	204	193	178	90	574	540	500	9.4	136	128	119	82
6.8	817	770	712	7.8	206	194	179	90	545	513	474	9.6	137	129	120	82
7.0	777	732	677	8.0	208	196	181	90	518	488	451	9.9	139	130	121	83
7.2	740	697	645	8.2	209	197	182	90	494	465	430	10.1	140	131	121	83
7.4	706	665	615	8.4	211	199	184	90	471	443	410	10.3	141	132	122	83
7.6	674	635	587	8.6	212	200	185	90	450	423	391	10.6	142	133	123	83
7.8	645	607	561	8.8	214	201	186	90	430	405	374	10.8	143	134	124	83
8.0	617	581	537	9.0	215	203	188	90	411	387	358	11.1	144	135	125	83
8.2	591	557	515	9.2	217	204	189	91	394	371	343	11.3	145	136	126	83
8.4	567	534	494	9.4	218	205	190	91	378	356	329	11.5	145	137	127	83
8.6	544	513	474	9.6	220	207	191	91	363	342	316	11.8	146	138	127	84
8.8	523	493	456	9.8	221	208	192	91	349	328	304	12.0	147	139	128	84
9.0	503	474	438	10.0	222	209	194	91	336	316	292	12.2	148	140	129	84
9.2	484	456	422	10.2	224	211	195	91	323	304	281	12.5	149	140	130	84
9.4	467	439	406	10.4	225	212	196	91	311	293	271	12.7	150	141	131	84
9.6	450	424	392	10.6	226	213	197	91	300	283	261	12.9	151	142	131	84
9.8	434	409	378	10.8	228	214	198	91	290	273	252	13.2	152	143	132	84
10.0	419	395	365	11.0	229	215	199	92	280	263	243	13.4	153	144	133	84
10.5	385	363	336	11.4	232	218	202	92	257	242	224	14.0	155	145	135	85
11.0	356	335	310	11.9	235	221	204	92	237	223	206	14.6	156	147	136	85

Table 50: Stocking levels for grand fir in the ABGR/CLUN plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	329	310	287	12.4	238	224	207	92	220	207	191	15.1	158	149	138	85
12.0	306	288	266	12.8	240	226	209	92	204	192	178	15.7	160	151	139	85
12.5	285	268	248	13.3	243	229	212	93	190	179	165	16.3	162	152	141	85
13.0	266	251	232	13.7	246	231	214	93	178	167	155	16.8	164	154	143	86
13.5	250	235	217	14.2	248	234	216	93	166	157	145	17.4	165	156	144	86
14.0	234	221	204	14.7	251	236	218	93	156	147	136	17.9	167	157	145	86
14.5	221	208	192	15.1	253	238	220	93	147	138	128	18.5	169	159	147	86
15.0	208	196	181	15.6	255	240	222	94	139	131	121	19.0	170	160	148	86
15.5	197	185	171	16.0	257	242	224	94	131	123	114	19.6	172	162	149	86
16.0	186	175	162	16.4	260	245	226	94	124	117	108	20.1	173	163	151	87
16.5	176	166	154	16.9	262	247	228	94	118	111	102	20.7	175	164	152	87
17.0	167	158	146	17.3	264	249	230	94	112	105	97	21.2	176	166	153	87
17.5	159	150	139	17.8	266	250	232	94	106	100	92	21.8	177	167	154	87
18.0	152	143	132	18.2	268	252	233	94	101	95	88	22.3	179	168	156	87
18.5	145	136	126	18.6	270	254	235	95	96	91	84	22.8	180	170	157	87
19.0	138	130	120	19.1	272	256	237	95	92	87	80	23.4	181	171	158	87
19.5	132	124	115	19.5	274	258	239	95	88	83	77	23.9	183	172	159	88
20.0	126	119	110	19.9	276	260	240	95	84	79	73	24.4	184	173	160	88
20.5	121	114	105	20.4	278	261	242	95	81	76	70	25.0	185	174	161	88
21.0	116	109	101	20.8	279	263	243	95	77	73	67	25.5	186	175	162	88
21.5	112	105	97	21.2	281	265	245	95	74	70	65	26.0	188	177	163	88
22.0	107	101	93	21.7	283	266	246	95	71	67	62	26.5	189	178	164	88
22.5	103	97	90	22.1	285	268	248	96	69	65	60	27.0	190	179	165	88
23.0	99	93	86	22.5	286	270	249	96	66	62	58	27.6	191	180	166	88
23.5	96	90	83	22.9	288	271	251	96	64	60	56	28.1	192	181	167	88
24.0	92	87	80	23.4	290	273	252	96	61	58	54	28.6	193	182	168	89
24.5	89	84	77	23.8	291	274	254	96	59	56	52	29.1	194	183	169	89
25.0	86	81	75	24.2	293	276	255	96	57	54	50	29.6	195	184	170	89
25.5	83	78	72	24.6	295	277	256	96	55	52	48	30.1	196	185	171	89
26.0	80	76	70	25.0	296	279	258	96	54	50	47	30.7	197	186	172	89
26.5	78	73	68	25.4	298	280	259	96	52	49	45	31.2	198	187	173	89
27.0	75	71	65	25.9	299	282	260	96	50	47	44	31.7	199	188	174	89
27.5	73	69	63	26.3	301	283	262	96	49	46	42	32.2	200	189	174	89
28.0	71	67	61	26.7	302	284	263	97	47	44	41	32.7	201	190	175	89
28.5	69	65	60	27.1	304	286	264	97	46	43	40	33.2	202	191	176	89
29.0	66	63	58	27.5	305	287	265	97	44	42	39	33.7	203	191	177	89
30.0	63	59	55	28.3	308	290	268	97	42	39	36	34.7	205	193	179	90

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 51: Stocking levels for ponderosa pine in the ABGR/LIBO2 plant association (full stocking = 365).

	UPPER MANAGEMENT ZONE (SDI = 162)								LOWER MANAGEMENT ZONE (SDI = 108)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9486	8822	8259	2.3	52	48	45	45	6356	5911	5533	2.8	35	32	30	37
1.2	6870	6389	5981	2.7	54	50	47	45	4603	4281	4007	3.3	36	34	31	38
1.4	5229	4863	4553	3.1	56	52	49	46	3504	3258	3050	3.8	37	35	33	39
1.6	4129	3840	3594	3.5	58	54	50	47	2766	2573	2408	4.3	39	36	34	39
1.8	3352	3117	2918	3.9	59	55	52	47	2246	2088	1955	4.7	40	37	35	40
2.0	2782	2587	2422	4.3	61	56	53	47	1864	1733	1622	5.2	41	38	35	40
2.2	2350	2185	2046	4.6	62	58	54	48	1574	1464	1371	5.7	42	39	36	41
2.4	2014	1873	1754	5.0	63	59	55	48	1350	1255	1175	6.1	42	39	37	41
2.6	1748	1626	1522	5.4	64	60	56	49	1171	1089	1020	6.6	43	40	38	41
2.8	1533	1426	1335	5.7	66	61	57	49	1027	955	894	7.0	44	41	38	42
3.0	1357	1262	1181	6.1	67	62	58	49	909	846	792	7.4	45	42	39	42
3.2	1211	1126	1054	6.4	68	63	59	49	811	754	706	7.9	45	42	39	42
3.4	1087	1011	947	6.8	69	64	60	50	729	678	634	8.3	46	43	40	42
3.6	983	914	856	7.2	69	65	60	50	658	612	573	8.7	47	43	41	43
3.8	893	831	778	7.5	70	65	61	50	598	556	521	9.2	47	44	41	43
4.0	816	758	710	7.9	71	66	62	50	546	508	476	9.6	48	44	42	43
4.2	748	696	651	8.2	72	67	63	51	501	466	436	10.0	48	45	42	43
4.4	689	641	600	8.5	73	68	63	51	462	429	402	10.4	49	45	42	43
4.6	637	592	554	8.9	73	68	64	51	427	397	371	10.9	49	46	43	44
4.8	591	549	514	9.2	74	69	65	51	396	368	345	11.3	50	46	43	44
5.0	549	511	478	9.6	75	70	65	51	368	342	320	11.7	50	47	44	44
5.2	513	477	446	9.9	76	70	66	52	343	319	299	12.1	51	47	44	44
5.4	479	446	417	10.2	76	71	66	52	321	299	280	12.5	51	48	44	44
5.6	450	418	391	10.6	77	72	67	52	301	280	262	12.9	52	48	45	44
5.8	423	393	368	10.9	78	72	67	52	283	263	246	13.3	52	48	45	45
6.0	398	370	346	11.2	78	73	68	52	267	248	232	13.7	52	49	46	45
6.2	375	349	327	11.6	79	73	69	52	252	234	219	14.1	53	49	46	45
6.4	355	330	309	11.9	79	74	69	52	238	221	207	14.5	53	49	46	45
6.6	336	313	293	12.2	80	74	70	53	225	209	196	14.9	54	50	47	45
6.8	319	297	278	12.6	80	75	70	53	214	199	186	15.3	54	50	47	45
7.0	303	282	264	12.9	81	75	70	53	203	189	177	15.7	54	50	47	45
7.2	288	268	251	13.2	81	76	71	53	193	180	168	16.1	55	51	48	46
7.4	275	255	239	13.5	82	76	71	53	184	171	160	16.5	55	51	48	46
7.6	262	244	228	13.9	82	77	72	53	175	163	153	16.9	55	51	48	46
7.8	250	233	218	14.2	83	77	72	53	168	156	146	17.3	56	52	48	46
8.0	239	222	208	14.5	83	78	73	53	160	149	139	17.7	56	52	49	46
8.2	229	213	199	14.8	84	78	73	53	153	143	134	18.1	56	52	49	46
8.4	219	204	191	15.1	84	79	73	54	147	137	128	18.5	57	53	49	46
8.6	210	196	183	15.5	85	79	74	54	141	131	123	18.9	57	53	50	46
8.8	202	188	176	15.8	85	79	74	54	135	126	118	19.3	57	53	50	46
9.0	194	181	169	16.1	86	80	75	54	130	121	113	19.7	57	53	50	46
9.2	187	174	163	16.4	86	80	75	54	125	116	109	20.1	58	54	50	47
9.4	180	167	156	16.7	87	81	75	54	120	112	105	20.4	58	54	51	47
9.6	173	161	151	17.0	87	81	76	54	116	108	101	20.8	58	54	51	47
9.8	167	155	145	17.4	87	81	76	54	112	104	97	21.2	59	54	51	47
10.0	161	150	140	17.7	88	82	76	54	108	100	94	21.6	59	55	51	47
10.5	148	137	129	18.4	89	83	77	55	99	92	86	22.5	60	55	52	47

Table 51: Stocking levels for ponderosa pine in the ABGR/LIBO2 plant association (full stocking = 365).

	UPPER MANAGEMENT ZONE (SDI = 162)								LOWER MANAGEMENT ZONE (SDI = 108)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	136	127	118	19.2	90	84	78	55	91	85	79	23.5	60	56	52	47
11.5	126	117	110	20.0	91	84	79	55	84	78	73	24.4	61	57	53	48
12.0	117	109	102	20.8	92	85	80	55	78	73	68	25.4	61	57	53	48
12.5	109	101	94	21.5	92	86	81	55	73	68	63	26.3	62	58	54	48
13.0	101	94	88	22.3	93	87	81	55	68	63	59	27.2	63	58	54	48
13.5	95	88	82	23.0	94	88	82	56	63	59	55	28.2	63	59	55	48
14.0	89	83	77	23.8	95	88	83	56	60	55	52	29.1	64	59	55	48
14.5	83	78	73	24.5	96	89	83	56	56	52	49	30.0	64	60	56	49
15.0	79	73	68	25.3	96	90	84	56	53	49	46	30.9	65	60	56	49
15.5	74	69	65	26.0	97	90	85	56	50	46	43	31.8	65	61	57	49
16.0	70	65	61	26.8	98	91	85	56	47	44	41	32.7	66	61	57	49
16.5	66	62	58	27.5	99	92	86	56	44	41	39	33.6	66	61	58	49
17.0	63	59	55	28.3	99	92	86	57	42	39	37	34.5	67	62	58	49
17.5	60	56	52	29.0	100	93	87	57	40	37	35	35.4	67	62	58	49
18.0	57	53	50	29.7	101	94	88	57	38	35	33	36.3	67	63	59	49
18.5	54	50	47	30.5	101	94	88	57	36	34	32	37.2	68	63	59	50
19.0	52	48	45	31.2	102	95	89	57	35	32	30	38.1	68	63	59	50
19.5	49	46	43	31.9	102	95	89	57	33	31	29	39.0	69	64	60	50
20.0	47	44	41	32.6	103	96	90	57	32	29	28	39.9	69	64	60	50
20.5	45	42	39	33.4	104	96	90	57	30	28	26	40.7	69	65	60	50
21.0	43	40	38	34.1	104	97	91	58	29	27	25	41.6	70	65	61	50
21.5	42	39	36	34.8	105	97	91	58	28	26	24	42.5	70	65	61	50
22.0	40	37	35	35.5	105	98	92	58	27	25	23	43.4	71	66	61	50
22.5	38	36	33	36.2	106	98	92	58	26	24	22	44.2	71	66	62	50
23.0	37	34	32	36.9	106	99	93	58	25	23	22	45.1	71	66	62	50
23.5	36	33	31	37.6	107	99	93	58	24	22	21	46.0	72	67	62	51
24.0	34	32	30	38.3	107	100	94	58	23	21	20	46.8	72	67	63	51
24.5	33	31	29	39.1	108	100	94	58	22	21	19	47.7	72	67	63	51
25.0	32	30	28	39.8	108	101	94	58	21	20	19	48.6	73	68	63	51
25.5	31	29	27	40.5	109	101	95	58	21	19	18	49.4	73	68	64	51
26.0	30	28	26	41.2	109	102	95	58	20	18	17	50.3	73	68	64	51
26.5	29	27	25	41.9	110	102	96	58	19	18	17	51.1	74	69	64	51
27.0	28	26	24	42.6	110	103	96	59	19	17	16	52.0	74	69	64	51
27.5	27	25	23	43.3	111	103	97	59	18	17	16	52.8	74	69	65	51
28.0	26	24	23	44.0	111	104	97	59	17	16	15	53.7	75	69	65	51
28.5	25	23	22	44.6	112	104	97	59	17	16	15	54.5	75	70	65	51
29.0	24	23	21	45.3	112	104	98	59	16	15	14	55.4	75	70	65	51
30.0	23	21	20	46.7	113	105	98	59	15	14	13	57.1	76	70	66	52

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 52: Stocking levels for Douglas-fir in the ABGR/LIBO2 plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9249	8708	8053	2.3	50	47	44	62	6166	5806	5368	2.9	34	32	29	55
1.2	7023	6613	6115	2.7	55	52	48	63	4682	4408	4076	3.3	37	35	32	57
1.4	5565	5239	4845	3.0	59	56	52	64	3710	3493	3230	3.7	40	37	35	58
1.6	4549	4283	3960	3.3	64	60	55	65	3033	2855	2640	4.1	42	40	37	59
1.8	3808	3585	3315	3.6	67	63	59	66	2538	2390	2210	4.5	45	42	39	60
2.0	3248	3058	2827	3.9	71	67	62	67	2165	2038	1885	4.8	47	44	41	61
2.2	2812	2648	2448	4.2	74	70	65	68	1875	1765	1632	5.2	49	47	43	61
2.4	2466	2322	2147	4.5	77	73	67	68	1644	1548	1431	5.5	52	49	45	62
2.6	2185	2057	1902	4.8	81	76	70	69	1457	1372	1268	5.9	54	51	47	63
2.8	1954	1840	1701	5.1	84	79	73	70	1303	1226	1134	6.2	56	52	48	63
3.0	1761	1658	1533	5.3	86	81	75	70	1174	1105	1022	6.5	58	54	50	64
3.2	1597	1504	1390	5.6	89	84	78	71	1065	1002	927	6.9	59	56	52	64
3.4	1457	1372	1269	5.9	92	87	80	71	972	915	846	7.2	61	58	53	65
3.6	1337	1259	1164	6.1	94	89	82	72	891	839	776	7.5	63	59	55	65
3.8	1232	1160	1073	6.4	97	91	84	72	821	773	715	7.8	65	61	56	66
4.0	1140	1074	993	6.6	100	94	87	73	760	716	662	8.1	66	62	58	66
4.2	1059	997	922	6.9	102	96	89	73	706	665	615	8.4	68	64	59	66
4.4	987	930	860	7.1	104	98	91	73	658	620	573	8.7	70	65	61	67
4.6	923	869	804	7.4	107	100	93	74	616	580	536	9.0	71	67	62	67
4.8	866	815	754	7.6	109	102	95	74	577	543	503	9.3	73	68	63	67
5.0	814	766	709	7.9	111	105	97	74	543	511	472	9.6	74	70	64	68
5.2	767	722	668	8.1	113	107	99	75	512	482	445	9.9	75	71	66	68
5.4	725	682	631	8.3	115	109	100	75	483	455	421	10.2	77	72	67	68
5.6	686	646	597	8.6	117	110	102	75	457	431	398	10.5	78	74	68	69
5.8	651	613	566	8.8	119	112	104	75	434	408	378	10.8	80	75	69	69
6.0	618	582	538	9.0	121	114	106	76	412	388	359	11.0	81	76	70	69
6.2	588	554	512	9.2	123	116	107	76	392	369	341	11.3	82	77	72	69
6.4	561	528	488	9.5	125	118	109	76	374	352	325	11.6	84	79	73	70
6.6	535	504	466	9.7	127	120	111	76	357	336	311	11.9	85	80	74	70
6.8	512	482	445	9.9	129	122	112	77	341	321	297	12.1	86	81	75	70
7.0	490	461	426	10.1	131	123	114	77	327	307	284	12.4	87	82	76	70
7.2	469	442	409	10.4	133	125	116	77	313	295	272	12.7	88	83	77	71
7.4	450	424	392	10.6	135	127	117	77	300	283	261	12.9	90	84	78	71
7.6	433	407	377	10.8	136	128	119	78	288	272	251	13.2	91	86	79	71
7.8	416	392	362	11.0	138	130	120	78	277	261	241	13.5	92	87	80	71
8.0	400	377	349	11.2	140	132	122	78	267	251	232	13.7	93	88	81	71
8.2	386	363	336	11.4	141	133	123	78	257	242	224	14.0	94	89	82	72
8.4	372	350	324	11.6	143	135	125	78	248	233	216	14.2	95	90	83	72
8.6	359	338	312	11.8	145	136	126	79	239	225	208	14.5	97	91	84	72
8.8	347	326	302	12.0	146	138	127	79	231	218	201	14.8	98	92	85	72
9.0	335	316	292	12.3	148	139	129	79	223	210	195	15.0	99	93	86	72
9.2	324	305	282	12.5	150	141	130	79	216	203	188	15.3	100	94	87	73
9.4	314	295	273	12.7	151	142	132	79	209	197	182	15.5	101	95	88	73
9.6	304	286	265	12.9	153	144	133	79	203	191	176	15.8	102	96	89	73
9.8	295	277	257	13.1	154	145	134	80	196	185	171	16.0	103	97	90	73
10.0	286	269	249	13.3	156	147	136	80	191	179	166	16.2	104	98	90	73
10.5	266	250	231	13.8	160	150	139	80	177	167	154	16.9	106	100	93	74
11.0	248	233	215	14.3	163	154	142	80	165	155	144	17.5	109	103	95	74

Table 52: Stocking levels for Douglas-fir in the ABGR/LIBO2 plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	231	218	202	14.7	167	157	145	81	154	145	134	18.1	111	105	97	74
12.0	217	204	189	15.2	170	160	148	81	145	136	126	18.6	114	107	99	75
12.5	204	192	178	15.7	174	164	151	81	136	128	118	19.2	116	109	101	75
13.0	192	181	167	16.2	177	167	154	82	128	121	112	19.8	118	111	103	75
13.5	182	171	158	16.6	181	170	157	82	121	114	105	20.4	120	113	105	76
14.0	172	162	150	17.1	184	173	160	82	115	108	100	20.9	123	115	107	76
14.5	163	154	142	17.6	187	176	163	83	109	102	95	21.5	125	117	109	76
15.0	155	146	135	18.0	190	179	166	83	103	97	90	22.1	127	119	110	76
15.5	147	139	128	18.5	193	182	168	83	98	93	86	22.6	129	121	112	77
16.0	141	132	122	18.9	196	185	171	83	94	88	82	23.2	131	123	114	77
16.5	134	126	117	19.4	199	188	173	84	89	84	78	23.7	133	125	116	77
17.0	128	121	112	19.8	202	190	176	84	86	81	74	24.3	135	127	117	77
17.5	123	116	107	20.2	205	193	179	84	82	77	71	24.8	137	129	119	78
18.0	118	111	102	20.7	208	196	181	84	78	74	68	25.3	139	131	121	78
18.5	113	106	98	21.1	211	198	183	85	75	71	66	25.9	140	132	122	78
19.0	108	102	94	21.5	214	201	186	85	72	68	63	26.4	142	134	124	78
19.5	104	98	91	22.0	216	204	188	85	70	65	61	26.9	144	136	126	78
20.0	100	94	87	22.4	219	206	191	85	67	63	58	27.4	146	137	127	79
20.5	97	91	84	22.8	222	209	193	85	64	61	56	27.9	148	139	129	79
21.0	93	88	81	23.2	224	211	195	86	62	59	54	28.4	149	141	130	79
21.5	90	85	78	23.6	227	214	197	86	60	56	52	29.0	151	142	132	79
22.0	87	82	76	24.1	229	216	200	86	58	55	50	29.5	153	144	133	79
22.5	84	79	73	24.5	232	218	202	86	56	53	49	30.0	155	146	135	80
23.0	81	77	71	24.9	234	221	204	86	54	51	47	30.5	156	147	136	80
23.5	79	74	68	25.3	237	223	206	86	52	49	46	31.0	158	149	138	80
24.0	76	72	66	25.7	239	225	208	87	51	48	44	31.5	160	150	139	80
24.5	74	70	64	26.1	242	228	211	87	49	46	43	32.0	161	152	140	80
25.0	72	67	62	26.5	244	230	213	87	48	45	42	32.5	163	153	142	80
25.5	70	65	61	26.9	247	232	215	87	46	44	40	32.9	164	155	143	81
26.0	68	64	59	27.3	249	234	217	87	45	42	39	33.4	166	156	145	81
26.5	66	62	57	27.7	251	237	219	87	44	41	38	33.9	168	158	146	81
27.0	64	60	56	28.1	254	239	221	88	43	40	37	34.4	169	159	147	81
27.5	62	58	54	28.5	256	241	223	88	41	39	36	34.9	171	161	149	81
28.0	60	57	53	28.9	258	243	225	88	40	38	35	35.3	172	162	150	81
28.5	59	55	51	29.3	260	245	227	88	39	37	34	35.8	174	163	151	81
29.0	57	54	50	29.6	263	247	229	88	38	36	33	36.3	175	165	152	82
30.0	54	51	47	30.4	267	251	233	88	36	34	32	37.2	178	168	155	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 53: Stocking levels for western larch in the ABGR/LIBO2 plant association (full stocking = 370).

	UPPER MANAGEMENT ZONE (SDI = 278)								LOWER MANAGEMENT ZONE (SDI = 185)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14908	14035	12978	1.8	81	77	71	60	9938	9357	8652	2.2	54	51	47	53
1.2	10875	10239	9468	2.2	85	80	74	61	7250	6826	6312	2.6	57	54	50	53
1.4	8329	7842	7251	2.5	89	84	78	61	5553	5228	4834	3.0	59	56	52	54
1.6	6611	6224	5756	2.8	92	87	80	62	4407	4150	3837	3.4	62	58	54	55
1.8	5392	5077	4695	3.1	95	90	83	63	3595	3385	3130	3.7	64	60	55	55
2.0	4494	4231	3912	3.3	98	92	85	63	2996	2821	2608	4.1	65	62	57	56
2.2	3811	3588	3318	3.6	101	95	88	64	2541	2392	2212	4.4	67	63	58	56
2.4	3278	3086	2854	3.9	103	97	90	64	2185	2058	1903	4.8	69	65	60	57
2.6	2854	2687	2485	4.2	105	99	92	64	1903	1792	1657	5.1	70	66	61	57
2.8	2511	2364	2186	4.5	107	101	93	65	1674	1576	1457	5.5	72	67	62	57
3.0	2228	2098	1940	4.8	109	103	95	65	1486	1399	1293	5.8	73	69	63	58
3.2	1993	1876	1735	5.0	111	105	97	65	1329	1251	1157	6.2	74	70	65	58
3.4	1795	1690	1562	5.3	113	107	99	66	1196	1126	1042	6.5	75	71	66	58
3.6	1626	1530	1415	5.6	115	108	100	66	1084	1020	943	6.8	77	72	67	59
3.8	1480	1394	1289	5.8	117	110	102	66	987	929	859	7.1	78	73	68	59
4.0	1355	1275	1179	6.1	118	111	103	67	903	850	786	7.5	79	74	69	59
4.2	1245	1172	1084	6.4	120	113	104	67	830	781	723	7.8	80	75	70	59
4.4	1149	1082	1000	6.6	121	114	106	67	766	721	667	8.1	81	76	70	60
4.6	1064	1002	926	6.9	123	116	107	67	709	668	617	8.4	82	77	71	60
4.8	988	930	860	7.1	124	117	108	67	659	620	574	8.7	83	78	72	60
5.0	921	867	802	7.4	126	118	109	68	614	578	534	9.1	84	79	73	60
5.2	860	810	749	7.6	127	119	110	68	574	540	499	9.4	85	80	74	60
5.4	806	759	702	7.9	128	121	112	68	537	506	468	9.7	85	80	74	61
5.6	757	713	659	8.2	129	122	113	68	505	475	439	10.0	86	81	75	61
5.8	712	671	620	8.4	131	123	114	68	475	447	413	10.3	87	82	76	61
6.0	672	632	585	8.7	132	124	115	68	448	422	390	10.6	88	83	77	61
6.2	635	598	553	8.9	133	125	116	69	423	398	368	10.9	89	84	77	61
6.4	601	566	523	9.2	134	126	117	69	401	377	349	11.2	89	84	78	61
6.6	570	536	496	9.4	135	127	118	69	380	358	331	11.5	90	85	79	62
6.8	541	509	471	9.6	136	128	119	69	361	340	314	11.8	91	86	79	62
7.0	515	484	448	9.9	138	129	120	69	343	323	299	12.1	92	86	80	62
7.2	490	461	427	10.1	139	130	121	69	327	308	284	12.4	92	87	80	62
7.4	467	440	407	10.4	140	131	122	69	312	293	271	12.7	93	88	81	62
7.6	446	420	389	10.6	141	132	122	70	298	280	259	13.0	94	88	82	62
7.8	427	402	371	10.9	142	133	123	70	284	268	248	13.3	94	89	82	62
8.0	408	384	356	11.1	143	134	124	70	272	256	237	13.6	95	89	83	63
8.2	391	368	341	11.3	144	135	125	70	261	246	227	13.9	96	90	83	63
8.4	375	353	327	11.6	144	136	126	70	250	236	218	14.2	96	91	84	63
8.6	360	339	314	11.8	145	137	127	70	240	226	209	14.5	97	91	84	63
8.8	346	326	301	12.1	146	138	127	70	231	217	201	14.8	98	92	85	63
9.0	333	314	290	12.3	147	139	128	70	222	209	193	15.1	98	92	85	63
9.2	321	302	279	12.5	148	139	129	71	214	201	186	15.3	99	93	86	63
9.4	309	291	269	12.8	149	140	130	71	206	194	179	15.6	99	93	86	63
9.6	298	280	259	13.0	150	141	130	71	199	187	173	15.9	100	94	87	63
9.8	287	271	250	13.2	151	142	131	71	192	180	167	16.2	100	95	87	64
10.0	278	261	242	13.5	151	143	132	71	185	174	161	16.5	101	95	88	64
10.5	255	240	222	14.0	153	144	134	71	170	160	148	17.2	102	96	89	64

Table 53: Stocking levels for western larch in the ABGR/LIBO2 plant association (full stocking = 370).

	UPPER MANAGEMENT ZONE (SDI = 278)								LOWER MANAGEMENT ZONE (SDI = 185)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	235	222	205	14.6	155	146	135	71	157	148	137	17.9	104	98	90	64
11.5	218	205	190	15.2	157	148	137	72	145	137	127	18.6	105	99	91	64
12.0	202	191	176	15.8	159	150	138	72	135	127	118	19.3	106	100	92	65
12.5	189	178	164	16.3	161	151	140	72	126	118	110	20.0	107	101	93	65
13.0	176	166	153	16.9	163	153	141	72	118	111	102	20.7	108	102	94	65
13.5	165	156	144	17.5	164	155	143	72	110	104	96	21.4	109	103	95	65
14.0	155	146	135	18.0	166	156	144	73	103	97	90	22.1	111	104	96	65
14.5	146	137	127	18.6	167	158	146	73	97	92	85	22.7	112	105	97	65
15.0	138	130	120	19.1	169	159	147	73	92	86	80	23.4	113	106	98	66
15.5	130	122	113	19.7	170	160	148	73	87	82	75	24.1	114	107	99	66
16.0	123	116	107	20.2	172	162	150	73	82	77	71	24.8	115	108	100	66
16.5	117	110	102	20.8	173	163	151	73	78	73	68	25.4	116	109	101	66
17.0	111	104	97	21.3	175	165	152	74	74	70	64	26.1	116	110	101	66
17.5	105	99	92	21.8	176	166	153	74	70	66	61	26.8	117	111	102	66
18.0	100	95	87	22.4	177	167	154	74	67	63	58	27.4	118	111	103	67
18.5	96	90	83	22.9	179	168	156	74	64	60	56	28.1	119	112	104	67
19.0	91	86	80	23.5	180	170	157	74	61	57	53	28.7	120	113	105	67
19.5	87	82	76	24.0	181	171	158	74	58	55	51	29.4	121	114	105	67
20.0	84	79	73	24.5	183	172	159	74	56	53	49	30.0	122	115	106	67
20.5	80	75	70	25.0	184	173	160	74	53	50	47	30.7	123	115	107	67
21.0	77	72	67	25.6	185	174	161	75	51	48	45	31.3	123	116	107	67
21.5	74	70	64	26.1	186	175	162	75	49	46	43	32.0	124	117	108	67
22.0	71	67	62	26.6	187	176	163	75	47	45	41	32.6	125	118	109	67
22.5	68	64	59	27.1	188	177	164	75	46	43	40	33.2	126	118	109	68
23.0	66	62	57	27.7	190	178	165	75	44	41	38	33.9	126	119	110	68
23.5	63	60	55	28.2	191	180	166	75	42	40	37	34.5	127	120	111	68
24.0	61	57	53	28.7	192	181	167	75	41	38	35	35.2	128	120	111	68
24.5	59	55	51	29.2	193	182	168	75	39	37	34	35.8	129	121	112	68
25.0	57	54	50	29.7	194	183	169	75	38	36	33	36.4	129	122	113	68
25.5	55	52	48	30.3	195	184	170	76	37	35	32	37.0	130	122	113	68
26.0	53	50	46	30.8	196	184	171	76	35	33	31	37.7	131	123	114	68
26.5	51	48	45	31.3	197	185	171	76	34	32	30	38.3	131	124	114	68
27.0	50	47	43	31.8	198	186	172	76	33	31	29	38.9	132	124	115	68
27.5	48	45	42	32.3	199	187	173	76	32	30	28	39.6	133	125	115	69
28.0	47	44	41	32.8	200	188	174	76	31	29	27	40.2	133	125	116	69
28.5	45	43	39	33.3	201	189	175	76	30	28	26	40.8	134	126	117	69
29.0	44	41	38	33.8	202	190	176	76	29	28	26	41.4	135	127	117	69
30.0	41	39	36	34.8	204	192	177	76	28	26	24	42.6	136	128	118	69

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 54: Stocking levels for lodgepole pine in the ABGR/LIBO2 plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59

Table 54: Stocking levels for lodgepole pine in the ABGR/LIBO2 plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 55: Stocking levels for Engelmann spruce in the ABGR/LIBO2 plant association (full stocking = 399).

	UPPER MANAGEMENT ZONE (SDI = 299)								LOWER MANAGEMENT ZONE (SDI = 200)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16004	15068	13933	1.8	87	82	76	73	10670	10045	9289	2.2	58	55	51	66
1.2	11675	10992	10164	2.1	92	86	80	74	7783	7328	6776	2.5	61	58	53	67
1.4	8942	8419	7785	2.4	96	90	83	74	5961	5613	5190	2.9	64	60	55	67
1.6	7098	6682	6179	2.7	99	93	86	75	4732	4455	4119	3.3	66	62	58	68
1.8	5789	5451	5040	2.9	102	96	89	75	3859	3634	3360	3.6	68	64	59	68
2.0	4825	4542	4200	3.2	105	99	92	76	3216	3028	2800	4.0	70	66	61	69
2.2	4091	3852	3562	3.5	108	102	94	76	2727	2568	2375	4.3	72	68	63	69
2.4	3519	3314	3064	3.8	111	104	96	77	2346	2209	2043	4.6	74	69	64	70
2.6	3064	2885	2668	4.1	113	106	98	77	2043	1923	1779	5.0	75	71	66	70
2.8	2696	2538	2347	4.3	115	109	100	78	1797	1692	1565	5.3	77	72	67	70
3.0	2392	2252	2083	4.6	117	111	102	78	1595	1502	1389	5.6	78	74	68	71
3.2	2140	2014	1863	4.8	119	113	104	78	1426	1343	1242	5.9	80	75	69	71
3.4	1927	1814	1677	5.1	121	114	106	78	1284	1209	1118	6.3	81	76	71	71
3.6	1745	1643	1519	5.4	123	116	107	79	1163	1095	1013	6.6	82	77	72	72
3.8	1589	1496	1384	5.6	125	118	109	79	1060	998	922	6.9	83	79	73	72
4.0	1454	1369	1266	5.9	127	119	110	79	970	913	844	7.2	85	80	74	72
4.2	1337	1258	1164	6.1	129	121	112	79	891	839	776	7.5	86	81	75	72
4.4	1233	1161	1074	6.4	130	123	113	80	822	774	716	7.8	87	82	76	73
4.6	1142	1075	994	6.6	132	124	115	80	761	717	663	8.1	88	83	76	73
4.8	1061	999	924	6.9	133	126	116	80	707	666	616	8.4	89	84	77	73
5.0	989	931	861	7.1	135	127	117	80	659	621	574	8.7	90	85	78	73
5.2	924	870	804	7.4	136	128	119	80	616	580	536	9.0	91	86	79	73
5.4	865	815	753	7.6	138	130	120	81	577	543	502	9.3	92	86	80	74
5.6	813	765	707	7.9	139	131	121	81	542	510	472	9.6	93	87	81	74
5.8	765	720	666	8.1	140	132	122	81	510	480	444	9.9	94	88	81	74
6.0	721	679	628	8.4	142	133	123	81	481	453	419	10.2	94	89	82	74
6.2	681	642	593	8.6	143	135	124	81	454	428	395	10.5	95	90	83	74
6.4	645	607	562	8.8	144	136	125	81	430	405	374	10.8	96	90	84	74
6.6	612	576	532	9.1	145	137	126	82	408	384	355	11.1	97	91	84	74
6.8	581	547	506	9.3	146	138	128	82	387	365	337	11.4	98	92	85	75
7.0	552	520	481	9.5	148	139	129	82	368	347	321	11.7	98	93	86	75
7.2	526	495	458	9.8	149	140	129	82	351	330	305	12.0	99	93	86	75
7.4	502	472	437	10.0	150	141	130	82	334	315	291	12.3	100	94	87	75
7.6	479	451	417	10.2	151	142	131	82	319	301	278	12.5	101	95	88	75
7.8	458	431	399	10.5	152	143	132	82	305	288	266	12.8	101	95	88	75
8.0	438	413	382	10.7	153	144	133	82	292	275	254	13.1	102	96	89	75
8.2	420	396	366	10.9	154	145	134	83	280	264	244	13.4	103	97	89	76
8.4	403	379	351	11.2	155	146	135	83	269	253	234	13.7	103	97	90	76
8.6	387	364	337	11.4	156	147	136	83	258	243	225	14.0	104	98	91	76
8.8	372	350	324	11.6	157	148	137	83	248	233	216	14.2	105	99	91	76
9.0	358	337	311	11.9	158	149	138	83	238	224	208	14.5	105	99	92	76
9.2	344	324	300	12.1	159	150	138	83	230	216	200	14.8	106	100	92	76
9.4	332	312	289	12.3	160	150	139	83	221	208	193	15.1	107	100	93	76
9.6	320	301	278	12.5	161	151	140	83	213	201	186	15.4	107	101	93	76
9.8	309	291	269	12.8	162	152	141	83	206	194	179	15.6	108	101	94	76
10.0	298	281	259	13.0	163	153	142	84	199	187	173	15.9	108	102	94	76
10.5	274	258	238	13.6	165	155	143	84	183	172	159	16.6	110	103	96	77

Table 55: Stocking levels for Engelmann spruce in the ABGR/LIBO2 plant association (full stocking = 399).

	UPPER MANAGEMENT ZONE (SDI = 299)								LOWER MANAGEMENT ZONE (SDI = 200)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	253	238	220	14.1	167	157	145	84	168	159	147	17.3	111	105	97	77
11.5	234	220	204	14.7	169	159	147	84	156	147	136	18.0	113	106	98	77
12.0	217	205	189	15.2	171	161	149	84	145	136	126	18.6	114	107	99	77
12.5	203	191	176	15.8	173	163	150	85	135	127	118	19.3	115	108	100	77
13.0	189	178	165	16.3	174	164	152	85	126	119	110	20.0	116	110	101	78
13.5	177	167	154	16.8	176	166	153	85	118	111	103	20.6	118	111	102	78
14.0	167	157	145	17.4	178	168	155	85	111	105	97	21.3	119	112	103	78
14.5	157	148	136	17.9	180	169	156	85	104	98	91	21.9	120	113	104	78
15.0	148	139	129	18.4	181	171	158	85	99	93	86	22.6	121	114	105	78
15.5	140	131	122	19.0	183	172	159	86	93	88	81	23.2	122	115	106	78
16.0	132	124	115	19.5	185	174	161	86	88	83	77	23.9	123	116	107	79
16.5	125	118	109	20.0	186	175	162	86	84	79	73	24.5	124	117	108	79
17.0	119	112	104	20.6	188	177	163	86	79	75	69	25.2	125	118	109	79
17.5	113	107	99	21.1	189	178	165	86	75	71	66	25.8	126	119	110	79
18.0	108	101	94	21.6	190	179	166	86	72	68	63	26.5	127	120	111	79
18.5	103	97	90	22.1	192	181	167	86	69	65	60	27.1	128	120	111	79
19.0	98	92	85	22.6	193	182	168	87	65	62	57	27.7	129	121	112	79
19.5	94	88	82	23.1	195	183	169	87	63	59	54	28.4	130	122	113	80
20.0	90	85	78	23.7	196	185	171	87	60	56	52	29.0	131	123	114	80
20.5	86	81	75	24.2	197	186	172	87	57	54	50	29.6	132	124	115	80
21.0	83	78	72	24.7	199	187	173	87	55	52	48	30.2	132	125	115	80
21.5	79	75	69	25.2	200	188	174	87	53	50	46	30.9	133	125	116	80
22.0	76	72	66	25.7	201	189	175	87	51	48	44	31.5	134	126	117	80
22.5	73	69	64	26.2	202	190	176	87	49	46	43	32.1	135	127	117	80
23.0	71	66	61	26.7	204	192	177	87	47	44	41	32.7	136	128	118	80
23.5	68	64	59	27.2	205	193	178	88	45	43	39	33.3	136	128	119	80
24.0	66	62	57	27.7	206	194	179	88	44	41	38	33.9	137	129	119	81
24.5	63	60	55	28.2	207	195	180	88	42	40	37	34.5	138	130	120	81
25.0	61	57	53	28.7	208	196	181	88	41	38	35	35.2	139	131	121	81
25.5	59	56	51	29.2	209	197	182	88	39	37	34	35.8	140	131	121	81
26.0	57	54	50	29.7	210	198	183	88	38	36	33	36.4	140	132	122	81
26.5	55	52	48	30.2	211	199	184	88	37	35	32	37.0	141	133	123	81
27.0	53	50	47	30.7	213	200	185	88	36	34	31	37.6	142	133	123	81
27.5	52	49	45	31.2	214	201	186	88	35	33	30	38.2	142	134	124	81
28.0	50	47	44	31.7	215	202	187	88	33	32	29	38.8	143	135	125	81
28.5	49	46	42	32.1	216	203	188	88	32	31	28	39.4	144	135	125	81
29.0	47	44	41	32.6	217	204	189	89	31	30	27	40.0	144	136	126	81
30.0	45	42	39	33.6	219	206	190	89	30	28	26	41.2	146	137	127	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 56: Stocking levels for grand fir in the ABGR/LIBO2 plant association (full stocking = 516).

	UPPER MANAGEMENT ZONE (SDI = 387)								LOWER MANAGEMENT ZONE (SDI = 258)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	20753	19539	18068	1.6	113	107	99	79	13835	13026	12045	1.9	75	71	66	72
1.2	15139	14254	13180	1.8	119	112	104	80	10093	9502	8787	2.2	79	75	69	73
1.4	11595	10917	10095	2.1	124	117	108	81	7730	7278	6730	2.6	83	78	72	73
1.6	9204	8665	8013	2.3	129	121	112	81	6136	5777	5342	2.9	86	81	75	74
1.8	7507	7068	6536	2.6	133	125	115	82	5005	4712	4357	3.2	88	83	77	75
2.0	6256	5890	5447	2.8	136	129	119	82	4171	3927	3631	3.5	91	86	79	75
2.2	5305	4995	4619	3.1	140	132	122	83	3537	3330	3079	3.8	93	88	81	76
2.4	4564	4297	3973	3.3	143	135	125	83	3042	2865	2649	4.1	96	90	83	76
2.6	3974	3741	3459	3.6	147	138	128	84	2649	2494	2306	4.4	98	92	85	76
2.8	3495	3291	3043	3.8	149	141	130	84	2330	2194	2029	4.6	100	94	87	77
3.0	3102	2921	2701	4.0	152	143	133	84	2068	1947	1801	4.9	102	96	88	77
3.2	2774	2612	2415	4.3	155	146	135	85	1850	1741	1610	5.2	103	97	90	77
3.4	2498	2352	2175	4.5	158	148	137	85	1665	1568	1450	5.5	105	99	91	78
3.6	2263	2131	1970	4.7	160	151	139	85	1509	1420	1313	5.8	107	100	93	78
3.8	2061	1940	1794	4.9	162	153	141	85	1374	1294	1196	6.1	108	102	94	78
4.0	1886	1776	1642	5.2	165	155	143	86	1257	1184	1095	6.3	110	103	96	78
4.2	1733	1632	1509	5.4	167	157	145	86	1156	1088	1006	6.6	111	105	97	79
4.4	1599	1506	1392	5.6	169	159	147	86	1066	1004	928	6.9	113	106	98	79
4.6	1481	1394	1289	5.8	171	161	149	86	987	929	859	7.1	114	107	99	79
4.8	1376	1295	1198	6.0	173	163	151	87	917	864	798	7.4	115	109	100	79
5.0	1282	1207	1116	6.3	175	165	152	87	855	805	744	7.7	117	110	101	79
5.2	1198	1128	1043	6.5	177	166	154	87	799	752	695	7.9	118	111	103	80
5.4	1122	1056	977	6.7	178	168	155	87	748	704	651	8.2	119	112	104	80
5.6	1054	992	917	6.9	180	170	157	87	702	661	612	8.5	120	113	105	80
5.8	992	934	863	7.1	182	171	158	87	661	622	576	8.7	121	114	106	80
6.0	935	880	814	7.3	184	173	160	88	623	587	543	9.0	122	115	107	80
6.2	884	832	769	7.5	185	174	161	88	589	555	513	9.2	124	116	108	81
6.4	836	787	728	7.8	187	176	163	88	558	525	485	9.5	125	117	108	81
6.6	793	747	690	8.0	188	177	164	88	529	498	460	9.8	126	118	109	81
6.8	753	709	656	8.2	190	179	165	88	502	473	437	10.0	127	119	110	81
7.0	716	674	624	8.4	191	180	167	88	478	450	416	10.3	128	120	111	81
7.2	682	642	594	8.6	193	182	168	89	455	428	396	10.5	129	121	112	81
7.4	651	613	566	8.8	194	183	169	89	434	408	378	10.8	130	122	113	81
7.6	621	585	541	9.0	196	184	170	89	414	390	361	11.0	130	123	114	81
7.8	594	559	517	9.2	197	186	172	89	396	373	345	11.3	131	124	114	82
8.0	569	535	495	9.4	198	187	173	89	379	357	330	11.5	132	125	115	82
8.2	545	513	474	9.6	200	188	174	89	363	342	316	11.8	133	125	116	82
8.4	522	492	455	9.8	201	189	175	89	348	328	303	12.0	134	126	117	82
8.6	502	472	437	10.0	202	191	176	89	334	315	291	12.3	135	127	117	82
8.8	482	454	420	10.2	204	192	177	89	321	303	280	12.5	136	128	118	82
9.0	464	437	404	10.4	205	193	178	90	309	291	269	12.8	137	129	119	82
9.2	446	420	389	10.6	206	194	179	90	298	280	259	13.0	137	129	120	82
9.4	430	405	374	10.8	207	195	180	90	287	270	250	13.2	138	130	120	83
9.6	415	390	361	11.0	208	196	181	90	276	260	241	13.5	139	131	121	83
9.8	400	377	348	11.2	210	197	182	90	267	251	232	13.7	140	132	122	83
10.0	386	364	336	11.4	211	198	183	90	258	243	224	14.0	141	132	122	83
10.5	355	334	309	11.9	214	201	186	90	237	223	206	14.6	142	134	124	83
11.0	328	309	285	12.4	216	204	188	91	218	206	190	15.2	144	136	126	83

Table 56: Stocking levels for grand fir in the ABGR/LIBO2 plant association (full stocking = 516).

	UPPER MANAGEMENT ZONE (SDI = 387)								LOWER MANAGEMENT ZONE (SDI = 258)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	303	286	264	12.9	219	206	191	91	202	190	176	15.8	146	137	127	83
12.0	282	265	245	13.4	221	208	193	91	188	177	164	16.4	148	139	129	84
12.5	263	247	229	13.8	224	211	195	91	175	165	152	16.9	149	141	130	84
13.0	245	231	214	14.3	226	213	197	91	164	154	142	17.5	151	142	131	84
13.5	230	216	200	14.8	229	215	199	92	153	144	133	18.1	152	143	133	84
14.0	216	203	188	15.3	231	217	201	92	144	136	125	18.7	154	145	134	84
14.5	203	191	177	15.7	233	219	203	92	135	128	118	19.3	155	146	135	85
15.0	192	180	167	16.2	235	221	205	92	128	120	111	19.8	157	148	136	85
15.5	181	170	158	16.7	237	223	207	92	121	114	105	20.4	158	149	138	85
16.0	171	161	149	17.1	239	225	208	92	114	108	99	21.0	160	150	139	85
16.5	162	153	141	17.6	241	227	210	93	108	102	94	21.5	161	151	140	85
17.0	154	145	134	18.1	243	229	212	93	103	97	90	22.1	162	153	141	85
17.5	147	138	128	18.5	245	231	213	93	98	92	85	22.7	163	154	142	86
18.0	140	132	122	19.0	247	233	215	93	93	88	81	23.2	165	155	143	86
18.5	133	126	116	19.4	249	234	217	93	89	84	77	23.8	166	156	144	86
19.0	127	120	111	19.9	251	236	218	93	85	80	74	24.3	167	157	145	86
19.5	122	115	106	20.3	252	238	220	93	81	76	71	24.9	168	158	147	86
20.0	116	110	101	20.8	254	239	221	93	78	73	68	25.4	169	160	148	86
20.5	112	105	97	21.2	256	241	223	94	74	70	65	26.0	171	161	148	86
21.0	107	101	93	21.7	258	242	224	94	71	67	62	26.5	172	162	149	86
21.5	103	97	89	22.1	259	244	226	94	69	65	60	27.1	173	163	150	87
22.0	99	93	86	22.6	261	246	227	94	66	62	57	27.6	174	164	151	87
22.5	95	89	83	23.0	262	247	228	94	63	60	55	28.2	175	165	152	87
23.0	91	86	80	23.4	264	248	230	94	61	57	53	28.7	176	166	153	87
23.5	88	83	77	23.9	265	250	231	94	59	55	51	29.3	177	167	154	87
24.0	85	80	74	24.3	267	251	232	94	57	53	49	29.8	178	168	155	87
24.5	82	77	71	24.8	268	253	234	94	55	51	48	30.3	179	169	156	87
25.0	79	75	69	25.2	270	254	235	95	53	50	46	30.9	180	169	157	87
25.5	77	72	67	25.6	271	256	236	95	51	48	44	31.4	181	170	158	87
26.0	74	70	64	26.1	273	257	238	95	49	46	43	31.9	182	171	158	87
26.5	72	67	62	26.5	274	258	239	95	48	45	42	32.5	183	172	159	88
27.0	69	65	60	26.9	276	259	240	95	46	44	40	33.0	184	173	160	88
27.5	67	63	58	27.4	277	261	241	95	45	42	39	33.5	185	174	161	88
28.0	65	61	57	27.8	278	262	242	95	43	41	38	34.0	186	175	162	88
28.5	63	59	55	28.2	280	263	243	95	42	40	37	34.6	186	176	162	88
29.0	61	58	53	28.7	281	265	245	95	41	38	36	35.1	187	176	163	88
30.0	58	54	50	29.5	284	267	247	95	39	36	34	36.1	189	178	165	88

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 57: Stocking levels for subalpine fir in the ABGR/LIBO2 plant association (full stocking = 373).

	UPPER MANAGEMENT ZONE (SDI = 280)								LOWER MANAGEMENT ZONE (SDI = 187)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14961	14085	13025	1.8	82	77	71	72	9974	9390	8683	2.2	54	51	47	64
1.2	10914	10275	9501	2.1	86	81	75	72	7276	6850	6334	2.6	57	54	50	65
1.4	8359	7870	7277	2.5	89	84	78	73	5573	5247	4851	3.0	60	56	52	66
1.6	6635	6247	5776	2.8	93	87	81	74	4423	4164	3851	3.4	62	58	54	67
1.8	5412	5095	4711	3.0	96	90	83	74	3608	3397	3141	3.7	64	60	56	67
2.0	4510	4246	3926	3.3	98	93	86	75	3007	2831	2618	4.1	66	62	57	68
2.2	3824	3601	3329	3.6	101	95	88	75	2550	2400	2220	4.4	67	63	59	68
2.4	3290	3097	2864	3.9	103	97	90	76	2193	2065	1909	4.8	69	65	60	69
2.6	2864	2697	2494	4.2	106	99	92	76	1910	1798	1663	5.1	70	66	61	69
2.8	2520	2372	2194	4.5	108	101	94	76	1680	1582	1462	5.5	72	68	63	69
3.0	2236	2105	1947	4.7	110	103	96	77	1491	1404	1298	5.8	73	69	64	70
3.2	2000	1883	1741	5.0	112	105	97	77	1333	1255	1161	6.1	74	70	65	70
3.4	1801	1696	1568	5.3	114	107	99	77	1201	1130	1045	6.5	76	71	66	70
3.6	1631	1536	1420	5.6	115	109	100	78	1088	1024	947	6.8	77	72	67	70
3.8	1486	1399	1293	5.8	117	110	102	78	990	933	862	7.1	78	73	68	71
4.0	1360	1280	1184	6.1	119	112	103	78	906	853	789	7.4	79	74	69	71
4.2	1249	1176	1088	6.3	120	113	105	78	833	784	725	7.8	80	75	70	71
4.4	1153	1085	1004	6.6	122	115	106	78	769	724	669	8.1	81	76	71	71
4.6	1068	1005	929	6.9	123	116	107	79	712	670	620	8.4	82	77	72	72
4.8	992	934	863	7.1	125	117	108	79	661	622	576	8.7	83	78	72	72
5.0	924	870	805	7.4	126	119	110	79	616	580	536	9.0	84	79	73	72
5.2	863	813	752	7.6	127	120	111	79	576	542	501	9.3	85	80	74	72
5.4	809	762	704	7.9	129	121	112	79	539	508	469	9.7	86	81	75	72
5.6	760	715	661	8.1	130	122	113	80	506	477	441	10.0	87	82	75	73
5.8	715	673	622	8.4	131	123	114	80	477	449	415	10.3	87	82	76	73
6.0	674	635	587	8.6	132	125	115	80	449	423	391	10.6	88	83	77	73
6.2	637	600	555	8.9	134	126	116	80	425	400	370	10.9	89	84	78	73
6.4	603	568	525	9.1	135	127	117	80	402	378	350	11.2	90	85	78	73
6.6	572	538	498	9.4	136	128	118	80	381	359	332	11.5	91	85	79	73
6.8	543	511	473	9.6	137	129	119	81	362	341	315	11.8	91	86	79	73
7.0	516	486	450	9.9	138	130	120	81	344	324	300	12.1	92	87	80	74
7.2	492	463	428	10.1	139	131	121	81	328	309	285	12.4	93	87	81	74
7.4	469	442	408	10.4	140	132	122	81	313	294	272	12.7	93	88	81	74
7.6	448	422	390	10.6	141	133	123	81	299	281	260	13.0	94	89	82	74
7.8	428	403	373	10.8	142	134	124	81	285	269	249	13.3	95	89	82	74
8.0	410	386	357	11.1	143	135	125	81	273	257	238	13.6	95	90	83	74
8.2	393	370	342	11.3	144	136	125	81	262	246	228	13.9	96	90	84	74
8.4	377	355	328	11.6	145	136	126	82	251	236	219	14.2	97	91	84	74
8.6	362	340	315	11.8	146	137	127	82	241	227	210	14.4	97	92	85	75
8.8	348	327	303	12.0	147	138	128	82	232	218	202	14.7	98	92	85	75
9.0	334	315	291	12.3	148	139	129	82	223	210	194	15.0	98	93	86	75
9.2	322	303	280	12.5	149	140	129	82	215	202	187	15.3	99	93	86	75
9.4	310	292	270	12.7	149	141	130	82	207	195	180	15.6	100	94	87	75
9.6	299	281	260	13.0	150	141	131	82	199	188	174	15.9	100	94	87	75
9.8	288	272	251	13.2	151	142	132	82	192	181	167	16.2	101	95	88	75
10.0	279	262	243	13.4	152	143	132	82	186	175	162	16.5	101	95	88	75
10.5	256	241	223	14.0	154	145	134	83	171	161	149	17.2	103	97	89	75

Table 57: Stocking levels for subalpine fir in the ABGR/LIBO2 plant association (full stocking = 373).

	UPPER MANAGEMENT ZONE (SDI = 280)								LOWER MANAGEMENT ZONE (SDI = 187)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	236	222	206	14.6	156	147	136	83	157	148	137	17.9	104	98	90	76
11.5	219	206	190	15.2	158	149	137	83	146	137	127	18.6	105	99	92	76
12.0	203	191	177	15.7	160	150	139	83	135	128	118	19.3	106	100	93	76
12.5	189	178	165	16.3	161	152	140	83	126	119	110	20.0	108	101	94	76
13.0	177	167	154	16.9	163	154	142	84	118	111	103	20.6	109	102	95	76
13.5	166	156	144	17.4	165	155	143	84	111	104	96	21.3	110	103	96	77
14.0	156	147	136	18.0	166	157	145	84	104	98	90	22.0	111	104	97	77
14.5	146	138	128	18.5	168	158	146	84	98	92	85	22.7	112	105	97	77
15.0	138	130	120	19.1	170	160	148	84	92	87	80	23.4	113	106	98	77
15.5	131	123	114	19.6	171	161	149	84	87	82	76	24.0	114	107	99	77
16.0	124	116	108	20.2	172	162	150	85	82	78	72	24.7	115	108	100	77
16.5	117	110	102	20.7	174	164	151	85	78	74	68	25.4	116	109	101	78
17.0	111	105	97	21.3	175	165	153	85	74	70	65	26.0	117	110	102	78
17.5	106	100	92	21.8	177	166	154	85	71	66	61	26.7	118	111	103	78
18.0	101	95	88	22.3	178	168	155	85	67	63	58	27.4	119	112	103	78
18.5	96	90	84	22.9	179	169	156	85	64	60	56	28.0	120	113	104	78
19.0	92	86	80	23.4	181	170	157	85	61	58	53	28.7	120	113	105	78
19.5	88	83	76	23.9	182	171	158	85	58	55	51	29.3	121	114	106	78
20.0	84	79	73	24.5	183	172	160	86	56	53	49	30.0	122	115	106	79
20.5	80	76	70	25.0	184	174	161	86	54	51	47	30.6	123	116	107	79
21.0	77	73	67	25.5	186	175	162	86	51	48	45	31.3	124	117	108	79
21.5	74	70	65	26.1	187	176	163	86	49	47	43	31.9	125	117	108	79
22.0	71	67	62	26.6	188	177	164	86	47	45	41	32.6	125	118	109	79
22.5	68	64	60	27.1	189	178	165	86	46	43	40	33.2	126	119	110	79
23.0	66	62	57	27.6	190	179	166	86	44	41	38	33.8	127	119	110	79
23.5	64	60	55	28.1	191	180	167	86	42	40	37	34.5	128	120	111	79
24.0	61	58	53	28.7	192	181	168	86	41	38	36	35.1	128	121	112	79
24.5	59	56	51	29.2	194	182	168	87	39	37	34	35.7	129	121	112	79
25.0	57	54	50	29.7	195	183	169	87	38	36	33	36.4	130	122	113	80
25.5	55	52	48	30.2	196	184	170	87	37	35	32	37.0	130	123	114	80
26.0	53	50	46	30.7	197	185	171	87	36	33	31	37.6	131	123	114	80
26.5	52	49	45	31.2	198	186	172	87	34	32	30	38.2	132	124	115	80
27.0	50	47	44	31.7	199	187	173	87	33	31	29	38.9	132	125	115	80
27.5	48	46	42	32.2	200	188	174	87	32	30	28	39.5	133	125	116	80
28.0	47	44	41	32.7	201	189	175	87	31	29	27	40.1	134	126	116	80
28.5	46	43	40	33.2	202	190	176	87	30	29	26	40.7	134	127	117	80
29.0	44	42	38	33.8	203	191	176	87	29	28	26	41.3	135	127	118	80
30.0	42	39	36	34.8	204	192	178	88	28	26	24	42.6	136	128	119	80

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 58: Stocking levels for ponderosa pine in the ABGR/VAME plant association (full stocking = 292).

	UPPER MANAGEMENT ZONE (SDI = 139)								LOWER MANAGEMENT ZONE (SDI = 93)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	8140	7570	7086	2.5	44	41	39	42	5454	5072	4748	3.0	30	28	26	34
1.2	5895	5482	5132	2.9	46	43	40	43	3949	3673	3438	3.6	31	29	27	35
1.4	4487	4173	3906	3.3	48	45	42	43	3006	2796	2617	4.1	32	30	28	36
1.6	3543	3295	3084	3.8	49	46	43	44	2374	2207	2066	4.6	33	31	29	36
1.8	2876	2675	2504	4.2	51	47	44	44	1927	1792	1678	5.1	34	32	30	37
2.0	2387	2220	2078	4.6	52	48	45	45	1599	1487	1392	5.6	35	32	30	37
2.2	2016	1875	1755	5.0	53	49	46	45	1351	1256	1176	6.1	36	33	31	38
2.4	1728	1607	1505	5.4	54	50	47	45	1158	1077	1008	6.6	36	34	32	38
2.6	1500	1395	1306	5.8	55	51	48	46	1005	935	875	7.1	37	34	32	38
2.8	1316	1224	1145	6.2	56	52	49	46	881	820	767	7.6	38	35	33	39
3.0	1164	1083	1014	6.6	57	53	50	46	780	726	679	8.0	38	36	33	39
3.2	1039	966	904	7.0	58	54	51	47	696	647	606	8.5	39	36	34	39
3.4	933	868	812	7.3	59	55	51	47	625	581	544	9.0	39	37	34	40
3.6	843	784	734	7.7	60	55	52	47	565	525	492	9.4	40	37	35	40
3.8	766	713	667	8.1	60	56	53	47	513	477	447	9.9	40	38	35	40
4.0	700	651	609	8.5	61	57	53	48	469	436	408	10.4	41	38	36	40
4.2	642	597	559	8.9	62	57	54	48	430	400	374	10.8	41	38	36	40
4.4	591	550	515	9.2	62	58	54	48	396	368	345	11.3	42	39	36	41
4.6	546	508	476	9.6	63	59	55	48	366	340	319	11.7	42	39	37	41
4.8	507	471	441	10.0	64	59	55	48	340	316	296	12.2	43	40	37	41
5.0	471	438	410	10.3	64	60	56	49	316	294	275	12.6	43	40	37	41
5.2	440	409	383	10.7	65	60	56	49	295	274	257	13.1	43	40	38	41
5.4	411	383	358	11.1	65	61	57	49	276	256	240	13.5	44	41	38	42
5.6	386	359	336	11.4	66	61	57	49	258	240	225	14.0	44	41	38	42
5.8	363	337	316	11.8	67	62	58	49	243	226	211	14.4	45	41	39	42
6.0	341	318	297	12.1	67	62	58	49	229	213	199	14.8	45	42	39	42
6.2	322	300	280	12.5	68	63	59	49	216	201	188	15.3	45	42	39	42
6.4	305	283	265	12.9	68	63	59	50	204	190	178	15.7	46	42	40	42
6.6	288	268	251	13.2	69	64	60	50	193	180	168	16.1	46	43	40	42
6.8	274	254	238	13.6	69	64	60	50	183	170	160	16.6	46	43	40	42
7.0	260	242	226	13.9	69	65	60	50	174	162	152	17.0	47	43	41	43
7.2	247	230	215	14.3	70	65	61	50	166	154	144	17.4	47	44	41	43
7.4	236	219	205	14.6	70	65	61	50	158	147	137	17.9	47	44	41	43
7.6	225	209	196	15.0	71	66	62	50	151	140	131	18.3	47	44	41	43
7.8	215	200	187	15.3	71	66	62	50	144	134	125	18.7	48	44	42	43
8.0	205	191	179	15.7	72	67	62	51	137	128	120	19.1	48	45	42	43
8.2	196	183	171	16.0	72	67	63	51	132	122	115	19.6	48	45	42	43
8.4	188	175	164	16.3	72	67	63	51	126	117	110	20.0	49	45	42	43
8.6	181	168	157	16.7	73	68	63	51	121	112	105	20.4	49	45	42	43
8.8	173	161	151	17.0	73	68	64	51	116	108	101	20.8	49	46	43	44
9.0	167	155	145	17.4	74	68	64	51	112	104	97	21.2	49	46	43	44
9.2	160	149	139	17.7	74	69	64	51	107	100	93	21.6	50	46	43	44
9.4	154	143	134	18.1	74	69	65	51	103	96	90	22.1	50	46	43	44
9.6	149	138	129	18.4	75	69	65	51	100	93	87	22.5	50	47	44	44
9.8	143	133	125	18.7	75	70	65	51	96	89	84	22.9	50	47	44	44
10.0	138	129	120	19.1	75	70	66	52	93	86	81	23.3	51	47	44	44
10.5	127	118	110	19.9	76	71	66	52	85	79	74	24.3	51	48	44	44

Table 58: Stocking levels for ponderosa pine in the ABGR/VAME plant association (full stocking = 292).

	UPPER MANAGEMENT ZONE (SDI = 139)								LOWER MANAGEMENT ZONE (SDI = 93)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	117	109	102	20.8	77	72	67	52	78	73	68	25.4	52	48	45	45
11.5	108	100	94	21.6	78	72	68	52	72	67	63	26.4	52	49	45	45
12.0	100	93	87	22.4	79	73	68	52	67	62	58	27.4	53	49	46	45
12.5	93	87	81	23.2	79	74	69	52	62	58	54	28.4	53	49	46	45
13.0	87	81	76	24.1	80	74	70	53	58	54	51	29.4	54	50	47	45
13.5	81	76	71	24.9	81	75	70	53	54	51	47	30.4	54	50	47	45
14.0	76	71	66	25.7	81	76	71	53	51	47	44	31.4	55	51	48	46
14.5	72	67	62	26.5	82	76	71	53	48	45	42	32.4	55	51	48	46
15.0	67	63	59	27.3	83	77	72	53	45	42	39	33.4	55	52	48	46
15.5	64	59	55	28.1	83	78	73	53	43	40	37	34.3	56	52	49	46
16.0	60	56	52	28.9	84	78	73	54	40	37	35	35.3	56	52	49	46
16.5	57	53	50	29.7	85	79	74	54	38	35	33	36.3	57	53	49	46
17.0	54	50	47	30.5	85	79	74	54	36	34	32	37.3	57	53	50	46
17.5	51	48	45	31.3	86	80	75	54	34	32	30	38.2	57	53	50	46
18.0	49	45	43	32.1	86	80	75	54	33	30	28	39.2	58	54	50	47
18.5	47	43	41	32.9	87	81	76	54	31	29	27	40.2	58	54	51	47
19.0	44	41	39	33.7	87	81	76	54	30	28	26	41.1	59	54	51	47
19.5	42	39	37	34.4	88	82	77	54	28	26	25	42.1	59	55	51	47
20.0	41	38	35	35.2	88	82	77	54	27	25	24	43.0	59	55	52	47
20.5	39	36	34	36.0	89	83	77	55	26	24	23	44.0	60	55	52	47
21.0	37	35	32	36.8	89	83	78	55	25	23	22	44.9	60	56	52	47
21.5	36	33	31	37.6	90	84	78	55	24	22	21	45.9	60	56	52	47
22.0	34	32	30	38.3	90	84	79	55	23	21	20	46.8	61	56	53	47
22.5	33	31	29	39.1	91	84	79	55	22	21	19	47.8	61	57	53	48
23.0	32	29	28	39.9	91	85	79	55	21	20	18	48.7	61	57	53	48
23.5	30	28	27	40.6	92	85	80	55	20	19	18	49.6	61	57	54	48
24.0	29	27	26	41.4	92	86	80	55	20	18	17	50.6	62	57	54	48
24.5	28	26	25	42.2	93	86	81	55	19	18	17	51.5	62	58	54	48
25.0	27	25	24	42.9	93	87	81	55	18	17	16	52.4	62	58	54	48
25.5	26	25	23	43.7	94	87	81	55	18	16	15	53.4	63	58	55	48
26.0	25	24	22	44.4	94	87	82	56	17	16	15	54.3	63	59	55	48
26.5	25	23	21	45.2	94	88	82	56	17	15	14	55.2	63	59	55	48
27.0	24	22	21	45.9	95	88	82	56	16	15	14	56.1	63	59	55	48
27.5	23	21	20	46.7	95	88	83	56	15	14	13	57.0	64	59	55	48
28.0	22	21	19	47.4	96	89	83	56	15	14	13	58.0	64	60	56	48
28.5	22	20	19	48.2	96	89	84	56	15	13	13	58.9	64	60	56	49
29.0	21	20	18	48.9	96	90	84	56	14	13	12	59.8	65	60	56	49
30.0	20	18	17	50.4	97	90	85	56	13	12	12	61.6	65	60	57	49

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 59: Stocking levels for Douglas-fir in the ABGR/VAME plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9249	8708	8053	2.3	50	47	44	62	6166	5806	5368	2.9	34	32	29	55
1.2	7023	6613	6115	2.7	55	52	48	63	4682	4408	4076	3.3	37	35	32	57
1.4	5565	5239	4845	3.0	59	56	52	64	3710	3493	3230	3.7	40	37	35	58
1.6	4549	4283	3960	3.3	64	60	55	65	3033	2855	2640	4.1	42	40	37	59
1.8	3808	3585	3315	3.6	67	63	59	66	2538	2390	2210	4.5	45	42	39	60
2.0	3248	3058	2827	3.9	71	67	62	67	2165	2038	1885	4.8	47	44	41	61
2.2	2812	2648	2448	4.2	74	70	65	68	1875	1765	1632	5.2	49	47	43	61
2.4	2466	2322	2147	4.5	77	73	67	68	1644	1548	1431	5.5	52	49	45	62
2.6	2185	2057	1902	4.8	81	76	70	69	1457	1372	1268	5.9	54	51	47	63
2.8	1954	1840	1701	5.1	84	79	73	70	1303	1226	1134	6.2	56	52	48	63
3.0	1761	1658	1533	5.3	86	81	75	70	1174	1105	1022	6.5	58	54	50	64
3.2	1597	1504	1390	5.6	89	84	78	71	1065	1002	927	6.9	59	56	52	64
3.4	1457	1372	1269	5.9	92	87	80	71	972	915	846	7.2	61	58	53	65
3.6	1337	1259	1164	6.1	94	89	82	72	891	839	776	7.5	63	59	55	65
3.8	1232	1160	1073	6.4	97	91	84	72	821	773	715	7.8	65	61	56	66
4.0	1140	1074	993	6.6	100	94	87	73	760	716	662	8.1	66	62	58	66
4.2	1059	997	922	6.9	102	96	89	73	706	665	615	8.4	68	64	59	66
4.4	987	930	860	7.1	104	98	91	73	658	620	573	8.7	70	65	61	67
4.6	923	869	804	7.4	107	100	93	74	616	580	536	9.0	71	67	62	67
4.8	866	815	754	7.6	109	102	95	74	577	543	503	9.3	73	68	63	67
5.0	814	766	709	7.9	111	105	97	74	543	511	472	9.6	74	70	64	68
5.2	767	722	668	8.1	113	107	99	75	512	482	445	9.9	75	71	66	68
5.4	725	682	631	8.3	115	109	100	75	483	455	421	10.2	77	72	67	68
5.6	686	646	597	8.6	117	110	102	75	457	431	398	10.5	78	74	68	69
5.8	651	613	566	8.8	119	112	104	75	434	408	378	10.8	80	75	69	69
6.0	618	582	538	9.0	121	114	106	76	412	388	359	11.0	81	76	70	69
6.2	588	554	512	9.2	123	116	107	76	392	369	341	11.3	82	77	72	69
6.4	561	528	488	9.5	125	118	109	76	374	352	325	11.6	84	79	73	70
6.6	535	504	466	9.7	127	120	111	76	357	336	311	11.9	85	80	74	70
6.8	512	482	445	9.9	129	122	112	77	341	321	297	12.1	86	81	75	70
7.0	490	461	426	10.1	131	123	114	77	327	307	284	12.4	87	82	76	70
7.2	469	442	409	10.4	133	125	116	77	313	295	272	12.7	88	83	77	71
7.4	450	424	392	10.6	135	127	117	77	300	283	261	12.9	90	84	78	71
7.6	433	407	377	10.8	136	128	119	78	288	272	251	13.2	91	86	79	71
7.8	416	392	362	11.0	138	130	120	78	277	261	241	13.5	92	87	80	71
8.0	400	377	349	11.2	140	132	122	78	267	251	232	13.7	93	88	81	71
8.2	386	363	336	11.4	141	133	123	78	257	242	224	14.0	94	89	82	72
8.4	372	350	324	11.6	143	135	125	78	248	233	216	14.2	95	90	83	72
8.6	359	338	312	11.8	145	136	126	79	239	225	208	14.5	97	91	84	72
8.8	347	326	302	12.0	146	138	127	79	231	218	201	14.8	98	92	85	72
9.0	335	316	292	12.3	148	139	129	79	223	210	195	15.0	99	93	86	72
9.2	324	305	282	12.5	150	141	130	79	216	203	188	15.3	100	94	87	73
9.4	314	295	273	12.7	151	142	132	79	209	197	182	15.5	101	95	88	73
9.6	304	286	265	12.9	153	144	133	79	203	191	176	15.8	102	96	89	73
9.8	295	277	257	13.1	154	145	134	80	196	185	171	16.0	103	97	90	73
10.0	286	269	249	13.3	156	147	136	80	191	179	166	16.2	104	98	90	73
10.5	266	250	231	13.8	160	150	139	80	177	167	154	16.9	106	100	93	74
11.0	248	233	215	14.3	163	154	142	80	165	155	144	17.5	109	103	95	74

Table 59: Stocking levels for Douglas-fir in the ABGR/VAME plant association (full stocking = 380).

	UPPER MANAGEMENT ZONE (SDI = 285)								LOWER MANAGEMENT ZONE (SDI = 190)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	231	218	202	14.7	167	157	145	81	154	145	134	18.1	111	105	97	74
12.0	217	204	189	15.2	170	160	148	81	145	136	126	18.6	114	107	99	75
12.5	204	192	178	15.7	174	164	151	81	136	128	118	19.2	116	109	101	75
13.0	192	181	167	16.2	177	167	154	82	128	121	112	19.8	118	111	103	75
13.5	182	171	158	16.6	181	170	157	82	121	114	105	20.4	120	113	105	76
14.0	172	162	150	17.1	184	173	160	82	115	108	100	20.9	123	115	107	76
14.5	163	154	142	17.6	187	176	163	83	109	102	95	21.5	125	117	109	76
15.0	155	146	135	18.0	190	179	166	83	103	97	90	22.1	127	119	110	76
15.5	147	139	128	18.5	193	182	168	83	98	93	86	22.6	129	121	112	77
16.0	141	132	122	18.9	196	185	171	83	94	88	82	23.2	131	123	114	77
16.5	134	126	117	19.4	199	188	173	84	89	84	78	23.7	133	125	116	77
17.0	128	121	112	19.8	202	190	176	84	86	81	74	24.3	135	127	117	77
17.5	123	116	107	20.2	205	193	179	84	82	77	71	24.8	137	129	119	78
18.0	118	111	102	20.7	208	196	181	84	78	74	68	25.3	139	131	121	78
18.5	113	106	98	21.1	211	198	183	85	75	71	66	25.9	140	132	122	78
19.0	108	102	94	21.5	214	201	186	85	72	68	63	26.4	142	134	124	78
19.5	104	98	91	22.0	216	204	188	85	70	65	61	26.9	144	136	126	78
20.0	100	94	87	22.4	219	206	191	85	67	63	58	27.4	146	137	127	79
20.5	97	91	84	22.8	222	209	193	85	64	61	56	27.9	148	139	129	79
21.0	93	88	81	23.2	224	211	195	86	62	59	54	28.4	149	141	130	79
21.5	90	85	78	23.6	227	214	197	86	60	56	52	29.0	151	142	132	79
22.0	87	82	76	24.1	229	216	200	86	58	55	50	29.5	153	144	133	79
22.5	84	79	73	24.5	232	218	202	86	56	53	49	30.0	155	146	135	80
23.0	81	77	71	24.9	234	221	204	86	54	51	47	30.5	156	147	136	80
23.5	79	74	68	25.3	237	223	206	86	52	49	46	31.0	158	149	138	80
24.0	76	72	66	25.7	239	225	208	87	51	48	44	31.5	160	150	139	80
24.5	74	70	64	26.1	242	228	211	87	49	46	43	32.0	161	152	140	80
25.0	72	67	62	26.5	244	230	213	87	48	45	42	32.5	163	153	142	80
25.5	70	65	61	26.9	247	232	215	87	46	44	40	32.9	164	155	143	81
26.0	68	64	59	27.3	249	234	217	87	45	42	39	33.4	166	156	145	81
26.5	66	62	57	27.7	251	237	219	87	44	41	38	33.9	168	158	146	81
27.0	64	60	56	28.1	254	239	221	88	43	40	37	34.4	169	159	147	81
27.5	62	58	54	28.5	256	241	223	88	41	39	36	34.9	171	161	149	81
28.0	60	57	53	28.9	258	243	225	88	40	38	35	35.3	172	162	150	81
28.5	59	55	51	29.3	260	245	227	88	39	37	34	35.8	174	163	151	81
29.0	57	54	50	29.6	263	247	229	88	38	36	33	36.3	175	165	152	82
30.0	54	51	47	30.4	267	251	233	88	36	34	32	37.2	178	168	155	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 60: Stocking levels for western larch in the ABGR/VAME plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16520	15553	14382	1.7	90	85	78	62	11013	10369	9588	2.1	60	57	52	54
1.2	12051	11346	10492	2.0	95	89	82	63	8034	7564	6994	2.5	63	59	55	55
1.4	9230	8690	8036	2.3	99	93	86	63	6153	5793	5357	2.9	66	62	57	56
1.6	7326	6898	6378	2.6	102	96	89	64	4884	4598	4252	3.2	68	64	59	57
1.8	5976	5626	5202	2.9	106	99	92	64	3984	3751	3468	3.6	70	66	61	57
2.0	4980	4689	4336	3.2	109	102	95	65	3320	3126	2890	3.9	72	68	63	58
2.2	4223	3976	3676	3.5	111	105	97	65	2815	2651	2451	4.2	74	70	65	58
2.4	3633	3420	3163	3.7	114	107	99	66	2422	2280	2108	4.6	76	72	66	59
2.6	3163	2978	2754	4.0	117	110	102	66	2109	1985	1836	4.9	78	73	68	59
2.8	2782	2620	2422	4.3	119	112	104	67	1855	1746	1615	5.2	79	75	69	59
3.0	2469	2325	2150	4.5	121	114	106	67	1646	1550	1433	5.5	81	76	70	60
3.2	2208	2079	1923	4.8	123	116	107	67	1472	1386	1282	5.8	82	77	72	60
3.4	1989	1872	1731	5.0	125	118	109	68	1326	1248	1154	6.2	84	79	73	60
3.6	1801	1696	1568	5.3	127	120	111	68	1201	1131	1046	6.5	85	80	74	61
3.8	1641	1545	1428	5.5	129	122	112	68	1094	1030	952	6.8	86	81	75	61
4.0	1501	1413	1307	5.8	131	123	114	68	1001	942	871	7.1	87	82	76	61
4.2	1380	1299	1201	6.0	133	125	116	69	920	866	801	7.4	88	83	77	61
4.4	1273	1199	1108	6.3	134	127	117	69	849	799	739	7.7	90	84	78	62
4.6	1179	1110	1026	6.5	136	128	118	69	786	740	684	8.0	91	85	79	62
4.8	1095	1031	953	6.8	138	130	120	69	730	687	636	8.3	92	86	80	62
5.0	1020	961	888	7.0	139	131	121	69	680	640	592	8.6	93	87	81	62
5.2	953	898	830	7.3	141	132	122	70	636	598	553	8.9	94	88	82	62
5.4	893	841	778	7.5	142	134	124	70	595	561	518	9.2	95	89	82	63
5.6	839	790	730	7.7	143	135	125	70	559	526	487	9.5	96	90	83	63
5.8	789	743	687	8.0	145	136	126	70	526	495	458	9.8	97	91	84	63
6.0	744	701	648	8.2	146	138	127	70	496	467	432	10.1	97	92	85	63
6.2	703	662	612	8.5	147	139	128	70	469	441	408	10.4	98	93	86	63
6.4	666	627	580	8.7	149	140	129	71	444	418	386	10.6	99	93	86	63
6.6	631	594	550	8.9	150	141	131	71	421	396	366	10.9	100	94	87	63
6.8	599	564	522	9.2	151	142	132	71	400	376	348	11.2	101	95	88	64
7.0	570	537	496	9.4	152	143	133	71	380	358	331	11.5	102	96	88	64
7.2	543	511	473	9.6	154	145	134	71	362	341	315	11.8	102	96	89	64
7.4	518	488	451	9.9	155	146	135	71	345	325	301	12.1	103	97	90	64
7.6	495	466	431	10.1	156	147	136	71	330	310	287	12.4	104	98	90	64
7.8	473	445	412	10.3	157	148	137	72	315	297	274	12.6	105	98	91	64
8.0	453	426	394	10.5	158	149	138	72	302	284	263	12.9	105	99	92	64
8.2	434	408	378	10.8	159	150	138	72	289	272	252	13.2	106	100	92	65
8.4	416	392	362	11.0	160	151	139	72	277	261	241	13.5	107	100	93	65
8.6	399	376	348	11.2	161	152	140	72	266	251	232	13.7	107	101	93	65
8.8	384	361	334	11.4	162	153	141	72	256	241	223	14.0	108	102	94	65
9.0	369	348	321	11.7	163	154	142	72	246	232	214	14.3	109	102	95	65
9.2	355	335	309	11.9	164	154	143	72	237	223	206	14.6	109	103	95	65
9.4	342	322	298	12.1	165	155	144	73	228	215	199	14.8	110	104	96	65
9.6	330	311	287	12.3	166	156	144	73	220	207	192	15.1	111	104	96	65
9.8	319	300	277	12.6	167	157	145	73	212	200	185	15.4	111	105	97	65
10.0	308	290	268	12.8	168	158	146	73	205	193	179	15.7	112	105	97	66
10.5	283	266	246	13.3	170	160	148	73	188	177	164	16.3	113	107	99	66

Table 60: Stocking levels for western larch in the ABGR/VAME plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	261	246	227	13.9	172	162	150	73	174	164	151	17.0	115	108	100	66
11.5	242	227	210	14.4	174	164	152	73	161	152	140	17.7	116	109	101	66
12.0	224	211	195	15.0	176	166	153	74	150	141	130	18.3	117	111	102	66
12.5	209	197	182	15.5	178	168	155	74	139	131	121	19.0	119	112	103	67
13.0	195	184	170	16.0	180	170	157	74	130	123	113	19.7	120	113	105	67
13.5	183	172	159	16.6	182	171	158	74	122	115	106	20.3	121	114	106	67
14.0	172	162	150	17.1	184	173	160	74	115	108	100	21.0	122	115	107	67
14.5	162	152	141	17.6	185	175	161	75	108	102	94	21.6	124	116	108	67
15.0	153	144	133	18.2	187	176	163	75	102	96	89	22.2	125	117	109	67
15.5	144	136	125	18.7	189	178	164	75	96	90	84	22.9	126	119	110	68
16.0	136	128	119	19.2	190	179	166	75	91	86	79	23.5	127	120	111	68
16.5	129	122	113	19.7	192	181	167	75	86	81	75	24.2	128	121	111	68
17.0	123	116	107	20.2	194	182	169	75	82	77	71	24.8	129	122	112	68
17.5	117	110	102	20.7	195	184	170	76	78	73	68	25.4	130	122	113	68
18.0	111	105	97	21.3	197	185	171	76	74	70	65	26.0	131	123	114	68
18.5	106	100	92	21.8	198	187	172	76	71	67	62	26.7	132	124	115	68
19.0	101	95	88	22.3	200	188	174	76	68	64	59	27.3	133	125	116	69
19.5	97	91	84	22.8	201	189	175	76	65	61	56	27.9	134	126	117	69
20.0	93	87	81	23.3	202	190	176	76	62	58	54	28.5	135	127	117	69
20.5	89	84	77	23.8	204	192	177	76	59	56	52	29.1	136	128	118	69
21.0	85	80	74	24.3	205	193	178	76	57	53	49	29.8	137	129	119	69
21.5	82	77	71	24.8	206	194	180	77	55	51	47	30.4	138	129	120	69
22.0	79	74	68	25.3	208	195	181	77	52	49	46	31.0	138	130	120	69
22.5	76	71	66	25.8	209	197	182	77	50	47	44	31.6	139	131	121	69
23.0	73	69	63	26.3	210	198	183	77	49	46	42	32.2	140	132	122	70
23.5	70	66	61	26.8	211	199	184	77	47	44	41	32.8	141	133	123	70
24.0	68	64	59	27.3	213	200	185	77	45	42	39	33.4	142	133	123	70
24.5	65	61	57	27.8	214	201	186	77	44	41	38	34.0	142	134	124	70
25.0	63	59	55	28.2	215	202	187	77	42	40	37	34.6	143	135	125	70
25.5	61	57	53	28.7	216	203	188	77	41	38	35	35.2	144	136	125	70
26.0	59	55	51	29.2	217	204	189	77	39	37	34	35.8	145	136	126	70
26.5	57	54	50	29.7	218	206	190	78	38	36	33	36.4	146	137	127	70
27.0	55	52	48	30.2	219	207	191	78	37	35	32	37.0	146	138	127	70
27.5	53	50	47	30.7	220	208	192	78	36	34	31	37.6	147	138	128	70
28.0	52	49	45	31.2	222	209	193	78	35	33	30	38.2	148	139	129	71
28.5	50	47	44	31.6	223	210	194	78	33	32	29	38.7	148	140	129	71
29.0	49	46	42	32.1	224	211	195	78	33	31	28	39.3	149	140	130	71
30.0	46	43	40	33.1	226	213	197	78	31	29	27	40.5	150	142	131	71

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 61: Stocking levels for lodgepole pine in the ABGR/VAME plant association (full stocking = 238).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59

Table 61: Stocking levels for lodgepole pine in the ABGR/VAME plant association (full stocking = 238).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 62: Stocking levels for Engelmann spruce in the ABGR/VAME plant association (full stocking = 341).

	UPPER MANAGEMENT ZONE (SDI = 256)								LOWER MANAGEMENT ZONE (SDI = 171)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	13679	12879	11909	1.9	75	70	65	70	9119	8586	7939	2.3	50	47	43	63
1.2	9979	9395	8687	2.2	78	74	68	71	6652	6263	5792	2.7	52	49	45	64
1.4	7643	7196	6654	2.6	82	77	71	72	5095	4797	4436	3.1	54	51	47	65
1.6	6066	5712	5281	2.9	85	80	74	72	4044	3808	3521	3.5	56	53	49	65
1.8	4948	4659	4308	3.2	87	82	76	73	3299	3106	2872	3.9	58	55	51	66
2.0	4124	3882	3590	3.5	90	85	78	73	2749	2588	2393	4.3	60	56	52	66
2.2	3497	3292	3044	3.8	92	87	80	74	2331	2195	2030	4.6	62	58	54	67
2.4	3008	2832	2619	4.1	95	89	82	74	2005	1888	1746	5.0	63	59	55	67
2.6	2619	2466	2280	4.4	97	91	84	74	1746	1644	1520	5.4	64	61	56	67
2.8	2304	2169	2006	4.7	99	93	86	75	1536	1446	1337	5.7	66	62	57	68
3.0	2045	1925	1780	5.0	100	94	87	75	1363	1283	1187	6.1	67	63	58	68
3.2	1829	1722	1592	5.2	102	96	89	75	1219	1148	1061	6.4	68	64	59	68
3.4	1647	1550	1434	5.5	104	98	90	76	1098	1034	956	6.8	69	65	60	69
3.6	1492	1404	1299	5.8	105	99	92	76	994	936	866	7.1	70	66	61	69
3.8	1358	1279	1183	6.1	107	101	93	76	906	853	788	7.5	71	67	62	69
4.0	1243	1170	1082	6.4	108	102	94	76	829	780	721	7.8	72	68	63	69
4.2	1142	1076	995	6.6	110	103	96	77	762	717	663	8.1	73	69	64	70
4.4	1054	992	918	6.9	111	105	97	77	703	662	612	8.5	74	70	65	70
4.6	976	919	850	7.2	113	106	98	77	651	613	567	8.8	75	71	65	70
4.8	907	854	789	7.4	114	107	99	77	605	569	526	9.1	76	72	66	70
5.0	845	796	736	7.7	115	108	100	78	563	530	490	9.4	77	72	67	70
5.2	790	743	687	8.0	116	110	101	78	526	496	458	9.8	78	73	68	71
5.4	740	696	644	8.2	118	111	102	78	493	464	429	10.1	78	74	68	71
5.6	695	654	605	8.5	119	112	103	78	463	436	403	10.4	79	75	69	71
5.8	654	615	569	8.8	120	113	104	78	436	410	379	10.7	80	75	70	71
6.0	616	580	537	9.0	121	114	105	78	411	387	358	11.1	81	76	70	71
6.2	582	548	507	9.3	122	115	106	79	388	366	338	11.4	81	77	71	71
6.4	551	519	480	9.6	123	116	107	79	368	346	320	11.7	82	77	71	72
6.6	523	492	455	9.8	124	117	108	79	348	328	303	12.0	83	78	72	72
6.8	496	467	432	10.1	125	118	109	79	331	312	288	12.3	83	79	73	72
7.0	472	444	411	10.3	126	119	110	79	315	296	274	12.6	84	79	73	72
7.2	450	423	391	10.6	127	120	111	79	300	282	261	13.0	85	80	74	72
7.4	429	404	373	10.8	128	121	112	79	286	269	249	13.3	85	80	74	72
7.6	409	386	357	11.1	129	121	112	79	273	257	238	13.6	86	81	75	72
7.8	392	369	341	11.3	130	122	113	80	261	246	227	13.9	87	82	75	73
8.0	375	353	326	11.6	131	123	114	80	250	235	217	14.2	87	82	76	73
8.2	359	338	313	11.8	132	124	115	80	239	225	208	14.5	88	83	76	73
8.4	344	324	300	12.1	133	125	115	80	230	216	200	14.8	88	83	77	73
8.6	331	311	288	12.3	133	126	116	80	220	208	192	15.1	89	84	77	73
8.8	318	299	277	12.6	134	126	117	80	212	199	184	15.4	89	84	78	73
9.0	306	288	266	12.8	135	127	118	80	204	192	177	15.7	90	85	78	73
9.2	294	277	256	13.1	136	128	118	80	196	185	171	16.0	91	85	79	73
9.4	283	267	247	13.3	137	129	119	80	189	178	165	16.3	91	86	79	73
9.6	273	257	238	13.6	137	129	120	81	182	172	159	16.6	92	86	80	74
9.8	264	248	230	13.8	138	130	120	81	176	166	153	16.9	92	87	80	74
10.0	255	240	222	14.1	139	131	121	81	170	160	148	17.2	93	87	81	74
10.5	234	220	204	14.7	141	133	123	81	156	147	136	18.0	94	88	82	74

Table 62: Stocking levels for Engelmann spruce in the ABGR/VAME plant association (full stocking = 341).

	UPPER MANAGEMENT ZONE (SDI = 256)								LOWER MANAGEMENT ZONE (SDI = 171)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	216	203	188	15.3	143	134	124	81	144	136	125	18.7	95	89	83	74
11.5	200	188	174	15.9	144	136	126	81	133	126	116	19.4	96	91	84	74
12.0	186	175	162	16.5	146	137	127	82	124	117	108	20.2	97	92	85	75
12.5	173	163	151	17.0	148	139	128	82	115	109	100	20.9	98	93	86	75
13.0	162	152	141	17.6	149	140	130	82	108	102	94	21.6	99	94	87	75
13.5	152	143	132	18.2	151	142	131	82	101	95	88	22.3	100	95	87	75
14.0	142	134	124	18.8	152	143	132	82	95	89	83	23.0	101	95	88	75
14.5	134	126	117	19.4	154	145	134	83	89	84	78	23.7	102	96	89	75
15.0	126	119	110	20.0	155	146	135	83	84	79	73	24.4	103	97	90	76
15.5	119	112	104	20.5	156	147	136	83	80	75	69	25.1	104	98	91	76
16.0	113	106	98	21.1	158	148	137	83	75	71	66	25.8	105	99	92	76
16.5	107	101	93	21.7	159	150	138	83	71	67	62	26.5	106	100	92	76
17.0	102	96	89	22.2	160	151	140	83	68	64	59	27.2	107	101	93	76
17.5	97	91	84	22.8	162	152	141	83	64	61	56	27.9	108	101	94	76
18.0	92	87	80	23.4	163	153	142	84	61	58	53	28.6	109	102	95	76
18.5	88	83	77	23.9	164	154	143	84	59	55	51	29.3	109	103	95	77
19.0	84	79	73	24.5	165	156	144	84	56	53	49	30.0	110	104	96	77
19.5	80	76	70	25.0	166	157	145	84	53	50	47	30.7	111	104	97	77
20.0	77	72	67	25.6	168	158	146	84	51	48	45	31.3	112	105	97	77
20.5	74	69	64	26.1	169	159	147	84	49	46	43	32.0	112	106	98	77
21.0	71	66	61	26.7	170	160	148	84	47	44	41	32.7	113	107	99	77
21.5	68	64	59	27.2	171	161	149	84	45	43	39	33.4	114	107	99	77
22.0	65	61	57	27.8	172	162	150	84	43	41	38	34.0	115	108	100	77
22.5	63	59	55	28.3	173	163	151	85	42	39	36	34.7	115	109	100	78
23.0	60	57	52	28.9	174	164	151	85	40	38	35	35.4	116	109	101	78
23.5	58	55	51	29.4	175	165	152	85	39	36	34	36.0	117	110	102	78
24.0	56	53	49	30.0	176	166	153	85	37	35	33	36.7	117	110	102	78
24.5	54	51	47	30.5	177	167	154	85	36	34	31	37.4	118	111	103	78
25.0	52	49	45	31.0	178	168	155	85	35	33	30	38.0	119	112	103	78
25.5	50	47	44	31.6	179	168	156	85	34	32	29	38.7	119	112	104	78
26.0	49	46	42	32.1	180	169	157	85	33	31	28	39.3	120	113	104	78
26.5	47	44	41	32.6	181	170	157	85	31	30	27	40.0	120	113	105	78
27.0	46	43	40	33.2	182	171	158	85	30	29	27	40.6	121	114	105	78
27.5	44	42	39	33.7	183	172	159	86	30	28	26	41.3	122	115	106	78
28.0	43	40	37	34.2	183	173	160	86	29	27	25	41.9	122	115	106	79
28.5	42	39	36	34.8	184	174	160	86	28	26	24	42.6	123	116	107	79
29.0	40	38	35	35.3	185	174	161	86	27	25	23	43.2	123	116	107	79
30.0	38	36	33	36.3	187	176	163	86	25	24	22	44.5	125	117	108	79

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 63: Stocking levels for grand fir in the ABGR/VAME plant association (full stocking = 455).

	UPPER MANAGEMENT ZONE (SDI = 341)								LOWER MANAGEMENT ZONE (SDI = 228)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	18300	17230	15932	1.7	100	94	87	77	12200	11487	10622	2.0	67	63	58	69
1.2	13350	12569	11622	1.9	105	99	91	78	8900	8379	7748	2.4	70	66	61	70
1.4	10225	9627	8902	2.2	109	103	95	78	6817	6418	5935	2.7	73	69	63	71
1.6	8116	7641	7066	2.5	113	107	99	79	5411	5094	4710	3.0	76	71	66	72
1.8	6620	6232	5763	2.8	117	110	102	80	4413	4155	3842	3.4	78	73	68	72
2.0	5517	5194	4803	3.0	120	113	105	80	3678	3463	3202	3.7	80	76	70	73
2.2	4678	4404	4073	3.3	123	116	108	81	3119	2936	2715	4.0	82	78	72	73
2.4	4024	3789	3504	3.5	126	119	110	81	2683	2526	2336	4.3	84	79	73	74
2.6	3504	3299	3051	3.8	129	122	112	81	2336	2199	2034	4.6	86	81	75	74
2.8	3082	2902	2683	4.0	132	124	115	82	2055	1935	1789	4.9	88	83	76	74
3.0	2736	2575	2382	4.3	134	126	117	82	1824	1717	1588	5.3	90	84	78	75
3.2	2447	2303	2130	4.5	137	129	119	82	1631	1536	1420	5.6	91	86	79	75
3.4	2203	2074	1918	4.8	139	131	121	83	1469	1383	1279	5.9	93	87	81	75
3.6	1996	1879	1737	5.0	141	133	123	83	1330	1253	1158	6.1	94	89	82	76
3.8	1817	1711	1582	5.3	143	135	125	83	1212	1141	1055	6.4	95	90	83	76
4.0	1663	1566	1448	5.5	145	137	126	83	1109	1044	965	6.7	97	91	84	76
4.2	1528	1439	1331	5.7	147	138	128	84	1019	959	887	7.0	98	92	85	76
4.4	1410	1328	1228	6.0	149	140	130	84	940	885	818	7.3	99	93	86	77
4.6	1306	1229	1137	6.2	151	142	131	84	871	820	758	7.6	100	95	87	77
4.8	1213	1142	1056	6.4	152	144	133	84	809	761	704	7.9	102	96	88	77
5.0	1130	1064	984	6.7	154	145	134	84	754	710	656	8.2	103	97	89	77
5.2	1056	994	920	6.9	156	147	136	85	704	663	613	8.5	104	98	90	77
5.4	990	932	861	7.1	157	148	137	85	660	621	574	8.7	105	99	91	78
5.6	929	875	809	7.4	159	150	138	85	619	583	539	9.0	106	100	92	78
5.8	874	823	761	7.6	160	151	140	85	583	549	508	9.3	107	101	93	78
6.0	825	776	718	7.8	162	152	141	85	550	518	479	9.6	108	102	94	78
6.2	779	734	678	8.0	163	154	142	86	519	489	452	9.8	109	103	95	78
6.4	738	694	642	8.3	165	155	143	86	492	463	428	10.1	110	103	96	78
6.6	699	658	609	8.5	166	156	145	86	466	439	406	10.4	111	104	96	79
6.8	664	625	578	8.7	167	158	146	86	443	417	385	10.7	112	105	97	79
7.0	632	595	550	8.9	169	159	147	86	421	396	367	10.9	113	106	98	79
7.2	602	566	524	9.1	170	160	148	86	401	378	349	11.2	113	107	99	79
7.4	574	540	499	9.4	171	161	149	86	382	360	333	11.5	114	108	99	79
7.6	548	516	477	9.6	173	162	150	87	365	344	318	11.7	115	108	100	79
7.8	524	493	456	9.8	174	164	151	87	349	329	304	12.0	116	109	101	79
8.0	501	472	436	10.0	175	165	152	87	334	315	291	12.3	117	110	102	79
8.2	480	452	418	10.2	176	166	153	87	320	302	279	12.5	117	111	102	80
8.4	461	434	401	10.4	177	167	154	87	307	289	267	12.8	118	111	103	80
8.6	442	416	385	10.7	178	168	155	87	295	278	257	13.1	119	112	104	80
8.8	425	400	370	10.9	180	169	156	87	283	267	247	13.3	120	113	104	80
9.0	409	385	356	11.1	181	170	157	87	273	257	237	13.6	120	113	105	80
9.2	394	371	343	11.3	182	171	158	87	262	247	228	13.8	121	114	105	80
9.4	379	357	330	11.5	183	172	159	88	253	238	220	14.1	122	115	106	80
9.6	366	344	318	11.7	184	173	160	88	244	230	212	14.4	123	115	107	80
9.8	353	332	307	11.9	185	174	161	88	235	221	205	14.6	123	116	107	80
10.0	341	321	297	12.1	186	175	162	88	227	214	198	14.9	124	117	108	81
10.5	313	295	273	12.7	188	177	164	88	209	197	182	15.5	126	118	109	81
11.0	289	272	252	13.2	191	180	166	88	193	181	168	16.2	127	120	111	81

Table 63: Stocking levels for grand fir in the ABGR/VAME plant association (full stocking = 455).

	UPPER MANAGEMENT ZONE (SDI = 341)								LOWER MANAGEMENT ZONE (SDI = 228)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	268	252	233	13.7	193	182	168	89	178	168	155	16.8	129	121	112	81
12.0	249	234	216	14.2	195	184	170	89	166	156	144	17.4	130	123	113	81
12.5	232	218	202	14.7	197	186	172	89	154	145	134	18.0	132	124	115	82
13.0	216	204	188	15.2	200	188	174	89	144	136	126	18.7	133	125	116	82
13.5	203	191	177	15.8	202	190	175	89	135	127	118	19.3	134	127	117	82
14.0	190	179	166	16.3	204	192	177	89	127	120	111	19.9	136	128	118	82
14.5	179	169	156	16.8	205	193	179	90	119	112	104	20.5	137	129	119	82
15.0	169	159	147	17.3	207	195	181	90	113	106	98	21.1	138	130	120	83
15.5	160	150	139	17.7	209	197	182	90	106	100	93	21.7	139	131	121	83
16.0	151	142	132	18.2	211	199	184	90	101	95	88	22.3	141	132	122	83
16.5	143	135	125	18.7	213	200	185	90	96	90	83	22.9	142	134	123	83
17.0	136	128	118	19.2	214	202	187	90	91	85	79	23.5	143	135	124	83
17.5	129	122	113	19.7	216	204	188	91	86	81	75	24.1	144	136	125	83
18.0	123	116	107	20.2	218	205	190	91	82	77	72	24.7	145	137	126	83
18.5	118	111	102	20.7	219	207	191	91	78	74	68	25.3	146	138	127	84
19.0	112	106	98	21.2	221	208	192	91	75	70	65	25.9	147	139	128	84
19.5	107	101	93	21.6	223	210	194	91	72	67	62	26.5	148	140	129	84
20.0	103	97	89	22.1	224	211	195	91	68	64	60	27.1	149	141	130	84
20.5	98	93	86	22.6	226	212	196	91	66	62	57	27.7	150	142	131	84
21.0	94	89	82	23.1	227	214	198	91	63	59	55	28.3	151	143	132	84
21.5	91	85	79	23.6	229	215	199	92	60	57	53	28.9	152	143	133	84
22.0	87	82	76	24.0	230	217	200	92	58	55	51	29.4	153	144	133	84
22.5	84	79	73	24.5	231	218	201	92	56	53	49	30.0	154	145	134	84
23.0	81	76	70	25.0	233	219	203	92	54	51	47	30.6	155	146	135	85
23.5	78	73	68	25.4	234	220	204	92	52	49	45	31.2	156	147	136	85
24.0	75	71	65	25.9	235	222	205	92	50	47	43	31.7	157	148	137	85
24.5	72	68	63	26.4	237	223	206	92	48	45	42	32.3	158	149	137	85
25.0	70	66	61	26.8	238	224	207	92	47	44	41	32.9	159	149	138	85
25.5	67	64	59	27.3	239	225	208	92	45	42	39	33.4	160	150	139	85
26.0	65	61	57	27.8	241	226	209	92	43	41	38	34.0	160	151	140	85
26.5	63	59	55	28.2	242	228	211	93	42	40	37	34.6	161	152	140	85
27.0	61	58	53	28.7	243	229	212	93	41	38	35	35.1	162	153	141	85
27.5	59	56	52	29.1	244	230	213	93	39	37	34	35.7	163	153	142	85
28.0	57	54	50	29.6	245	231	214	93	38	36	33	36.3	164	154	142	86
28.5	56	52	48	30.1	247	232	215	93	37	35	32	36.8	164	155	143	86
29.0	54	51	47	30.5	248	233	216	93	36	34	31	37.4	165	156	144	86
30.0	51	48	44	31.4	250	235	218	93	34	32	30	38.5	167	157	145	86

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 64: Stocking levels for subalpine fir in the ABGR/VAME plant association (full stocking = 412).

	UPPER MANAGEMENT ZONE (SDI = 309)								LOWER MANAGEMENT ZONE (SDI = 206)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16526	15559	14387	1.7	90	85	78	73	11017	10373	9592	2.1	60	57	52	66
1.2	12055	11350	10495	2.0	95	89	82	74	8037	7567	6997	2.5	63	59	55	67
1.4	9233	8693	8039	2.3	99	93	86	75	6156	5795	5359	2.9	66	62	57	68
1.6	7329	6900	6380	2.6	102	96	89	75	4886	4600	4254	3.2	68	64	59	68
1.8	5978	5628	5204	2.9	106	99	92	76	3985	3752	3469	3.6	70	66	61	69
2.0	4982	4690	4337	3.2	109	102	95	76	3321	3127	2891	3.9	72	68	63	69
2.2	4224	3977	3678	3.5	112	105	97	77	2816	2652	2452	4.2	74	70	65	70
2.4	3634	3421	3164	3.7	114	107	99	77	2423	2281	2109	4.6	76	72	66	70
2.6	3164	2979	2755	4.0	117	110	102	78	2109	1986	1836	4.9	78	73	68	71
2.8	2783	2621	2423	4.3	119	112	104	78	1856	1747	1615	5.2	79	75	69	71
3.0	2470	2326	2151	4.5	121	114	106	78	1647	1550	1434	5.5	81	76	70	71
3.2	2209	2080	1923	4.8	123	116	107	79	1473	1387	1282	5.8	82	77	72	72
3.4	1989	1873	1732	5.0	125	118	109	79	1326	1249	1155	6.2	84	79	73	72
3.6	1802	1697	1569	5.3	127	120	111	79	1201	1131	1046	6.5	85	80	74	72
3.8	1641	1545	1429	5.5	129	122	113	80	1094	1030	952	6.8	86	81	75	72
4.0	1502	1414	1307	5.8	131	123	114	80	1001	943	872	7.1	87	82	76	73
4.2	1380	1299	1202	6.0	133	125	116	80	920	866	801	7.4	89	83	77	73
4.4	1273	1199	1109	6.3	134	127	117	80	849	799	739	7.7	90	84	78	73
4.6	1179	1110	1027	6.5	136	128	118	80	786	740	684	8.0	91	85	79	73
4.8	1095	1031	954	6.8	138	130	120	81	730	688	636	8.3	92	86	80	74
5.0	1021	961	889	7.0	139	131	121	81	681	641	592	8.6	93	87	81	74
5.2	954	898	830	7.3	141	132	122	81	636	599	554	8.9	94	88	82	74
5.4	894	841	778	7.5	142	134	124	81	596	561	519	9.2	95	89	82	74
5.6	839	790	730	7.7	144	135	125	81	559	527	487	9.5	96	90	83	74
5.8	790	743	687	8.0	145	136	126	81	526	496	458	9.8	97	91	84	74
6.0	745	701	648	8.2	146	138	127	82	496	467	432	10.1	97	92	85	75
6.2	704	662	613	8.5	148	139	128	82	469	442	408	10.4	98	93	86	75
6.4	666	627	580	8.7	149	140	130	82	444	418	387	10.6	99	93	86	75
6.6	631	595	550	8.9	150	141	131	82	421	396	367	10.9	100	94	87	75
6.8	600	565	522	9.2	151	142	132	82	400	376	348	11.2	101	95	88	75
7.0	570	537	497	9.4	152	144	133	82	380	358	331	11.5	102	96	88	75
7.2	543	511	473	9.6	154	145	134	83	362	341	315	11.8	102	96	89	75
7.4	518	488	451	9.9	155	146	135	83	345	325	301	12.1	103	97	90	76
7.6	495	466	431	10.1	156	147	136	83	330	311	287	12.3	104	98	90	76
7.8	473	445	412	10.3	157	148	137	83	315	297	275	12.6	105	99	91	76
8.0	453	426	394	10.5	158	149	138	83	302	284	263	12.9	105	99	92	76
8.2	434	408	378	10.8	159	150	138	83	289	272	252	13.2	106	100	92	76
8.4	416	392	362	11.0	160	151	139	83	277	261	241	13.5	107	101	93	76
8.6	399	376	348	11.2	161	152	140	83	266	251	232	13.7	107	101	94	76
8.8	384	361	334	11.4	162	153	141	83	256	241	223	14.0	108	102	94	76
9.0	369	348	321	11.7	163	154	142	84	246	232	214	14.3	109	102	95	76
9.2	355	335	309	11.9	164	155	143	84	237	223	206	14.6	109	103	95	77
9.4	342	322	298	12.1	165	155	144	84	228	215	199	14.8	110	104	96	77
9.6	330	311	288	12.3	166	156	145	84	220	207	192	15.1	111	104	96	77
9.8	319	300	277	12.6	167	157	145	84	212	200	185	15.4	111	105	97	77
10.0	308	290	268	12.8	168	158	146	84	205	193	179	15.7	112	105	97	77
10.5	283	266	246	13.3	170	160	148	84	189	178	164	16.3	113	107	99	77

Table 64: Stocking levels for subalpine fir in the ABGR/VAME plant association (full stocking = 412).

	UPPER MANAGEMENT ZONE (SDI = 309)								LOWER MANAGEMENT ZONE (SDI = 206)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	261	246	227	13.9	172	162	150	85	174	164	151	17.0	115	108	100	77
11.5	242	227	210	14.4	174	164	152	85	161	152	140	17.7	116	109	101	78
12.0	224	211	195	15.0	176	166	153	85	150	141	130	18.3	118	111	102	78
12.5	209	197	182	15.5	178	168	155	85	139	131	121	19.0	119	112	103	78
13.0	195	184	170	16.0	180	170	157	85	130	123	113	19.6	120	113	105	78
13.5	183	172	159	16.6	182	171	158	85	122	115	106	20.3	121	114	106	78
14.0	172	162	150	17.1	184	173	160	86	115	108	100	20.9	123	115	107	79
14.5	162	152	141	17.6	186	175	162	86	108	102	94	21.6	124	116	108	79
15.0	153	144	133	18.2	187	176	163	86	102	96	89	22.2	125	118	109	79
15.5	144	136	126	18.7	189	178	164	86	96	90	84	22.9	126	119	110	79
16.0	136	128	119	19.2	191	179	166	86	91	86	79	23.5	127	120	111	79
16.5	129	122	113	19.7	192	181	167	86	86	81	75	24.1	128	121	112	79
17.0	123	116	107	20.2	194	182	169	87	82	77	71	24.8	129	122	112	79
17.5	117	110	102	20.7	195	184	170	87	78	73	68	25.4	130	123	113	80
18.0	111	105	97	21.3	197	185	171	87	74	70	65	26.0	131	123	114	80
18.5	106	100	92	21.8	198	187	173	87	71	67	62	26.7	132	124	115	80
19.0	101	95	88	22.3	200	188	174	87	68	64	59	27.3	133	125	116	80
19.5	97	91	84	22.8	201	189	175	87	65	61	56	27.9	134	126	117	80
20.0	93	87	81	23.3	202	191	176	87	62	58	54	28.5	135	127	117	80
20.5	89	84	77	23.8	204	192	177	87	59	56	52	29.1	136	128	118	80
21.0	85	80	74	24.3	205	193	179	88	57	54	49	29.7	137	129	119	80
21.5	82	77	71	24.8	206	194	180	88	55	51	48	30.4	138	130	120	81
22.0	79	74	68	25.3	208	196	181	88	52	49	46	31.0	138	130	121	81
22.5	76	71	66	25.8	209	197	182	88	50	47	44	31.6	139	131	121	81
23.0	73	69	63	26.3	210	198	183	88	49	46	42	32.2	140	132	122	81
23.5	70	66	61	26.8	211	199	184	88	47	44	41	32.8	141	133	123	81
24.0	68	64	59	27.3	213	200	185	88	45	42	39	33.4	142	133	123	81
24.5	65	61	57	27.8	214	201	186	88	44	41	38	34.0	143	134	124	81
25.0	63	59	55	28.2	215	202	187	88	42	40	37	34.6	143	135	125	81
25.5	61	57	53	28.7	216	203	188	88	41	38	35	35.2	144	136	125	81
26.0	59	55	51	29.2	217	205	189	89	39	37	34	35.8	145	136	126	81
26.5	57	54	50	29.7	218	206	190	89	38	36	33	36.4	146	137	127	82
27.0	55	52	48	30.2	219	207	191	89	37	35	32	37.0	146	138	127	82
27.5	53	50	47	30.7	221	208	192	89	36	34	31	37.6	147	138	128	82
28.0	52	49	45	31.2	222	209	193	89	35	33	30	38.2	148	139	129	82
28.5	50	47	44	31.6	223	210	194	89	34	32	29	38.7	148	140	129	82
29.0	49	46	42	32.1	224	211	195	89	33	31	28	39.3	149	140	130	82
30.0	46	43	40	33.1	226	213	197	89	31	29	27	40.5	151	142	131	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 65: Stocking levels for Douglas-fir in the ABGR/VASC–LIBO2 plant association (full stocking = 347).

	UPPER MANAGEMENT ZONE (SDI = 260)								LOWER MANAGEMENT ZONE (SDI = 174)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	8447	7952	7354	2.4	46	43	40	60	5631	5302	4902	3.0	31	29	27	54
1.2	6414	6039	5584	2.8	50	47	44	62	4276	4026	3723	3.4	34	32	29	55
1.4	5082	4785	4424	3.1	54	51	47	63	3388	3190	2950	3.9	36	34	32	56
1.6	4154	3911	3616	3.5	58	55	50	64	2769	2607	2411	4.3	39	36	34	57
1.8	3477	3274	3027	3.8	61	58	53	65	2318	2182	2018	4.7	41	39	36	58
2.0	2966	2792	2582	4.1	65	61	56	66	1977	1861	1721	5.0	43	41	38	59
2.2	2568	2418	2236	4.4	68	64	59	66	1712	1612	1491	5.4	45	43	39	60
2.4	2252	2120	1961	4.7	71	67	62	67	1501	1413	1307	5.8	47	44	41	61
2.6	1996	1879	1737	5.0	74	69	64	68	1330	1253	1158	6.1	49	46	43	61
2.8	1784	1680	1553	5.3	76	72	66	68	1190	1120	1036	6.5	51	48	44	62
3.0	1608	1514	1400	5.6	79	74	69	69	1072	1009	933	6.9	53	50	46	62
3.2	1458	1373	1270	5.9	81	77	71	69	972	915	847	7.2	54	51	47	63
3.4	1331	1253	1159	6.1	84	79	73	70	887	835	772	7.5	56	53	49	63
3.6	1221	1149	1063	6.4	86	81	75	70	814	766	709	7.9	58	54	50	64
3.8	1125	1059	980	6.7	89	83	77	71	750	706	653	8.2	59	56	51	64
4.0	1041	980	907	7.0	91	86	79	71	694	654	604	8.5	61	57	53	65
4.2	967	911	842	7.2	93	88	81	71	645	607	561	8.8	62	58	54	65
4.4	902	849	785	7.5	95	90	83	72	601	566	523	9.1	63	60	55	65
4.6	843	794	734	7.7	97	92	85	72	562	529	489	9.5	65	61	56	66
4.8	791	744	688	8.0	99	94	87	72	527	496	459	9.8	66	62	58	66
5.0	743	700	647	8.2	101	95	88	73	496	467	431	10.1	68	64	59	66
5.2	701	660	610	8.5	103	97	90	73	467	440	407	10.4	69	65	60	67
5.4	662	623	576	8.7	105	99	92	73	441	415	384	10.7	70	66	61	67
5.6	626	590	545	9.0	107	101	93	74	418	393	364	11.0	71	67	62	67
5.8	594	559	517	9.2	109	103	95	74	396	373	345	11.3	73	68	63	67
6.0	565	531	491	9.4	111	104	96	74	376	354	328	11.6	74	70	64	68
6.2	537	506	468	9.7	113	106	98	74	358	337	312	11.9	75	71	65	68
6.4	512	482	446	9.9	114	108	100	75	341	321	297	12.1	76	72	66	68
6.6	489	460	426	10.1	116	109	101	75	326	307	284	12.4	77	73	67	68
6.8	467	440	407	10.4	118	111	103	75	312	293	271	12.7	79	74	68	69
7.0	447	421	389	10.6	120	113	104	75	298	281	260	13.0	80	75	69	69
7.2	429	404	373	10.8	121	114	106	76	286	269	249	13.3	81	76	70	69
7.4	411	387	358	11.1	123	116	107	76	274	258	239	13.5	82	77	71	69
7.6	395	372	344	11.3	124	117	108	76	263	248	229	13.8	83	78	72	70
7.8	380	358	331	11.5	126	119	110	76	253	238	220	14.1	84	79	73	70
8.0	366	344	318	11.7	128	120	111	77	244	229	212	14.4	85	80	74	70
8.2	352	332	307	12.0	129	122	112	77	235	221	204	14.6	86	81	75	70
8.4	340	320	296	12.2	131	123	114	77	226	213	197	14.9	87	82	76	70
8.6	328	309	285	12.4	132	124	115	77	219	206	190	15.2	88	83	77	71
8.8	317	298	276	12.6	134	126	116	77	211	199	184	15.4	89	84	78	71
9.0	306	288	266	12.8	135	127	118	77	204	192	178	15.7	90	85	78	71
9.2	296	279	258	13.0	137	129	119	78	197	186	172	16.0	91	86	79	71
9.4	287	270	250	13.2	138	130	120	78	191	180	166	16.2	92	87	80	71
9.6	278	261	242	13.5	140	131	121	78	185	174	161	16.5	93	88	81	71
9.8	269	253	234	13.7	141	133	123	78	179	169	156	16.7	94	88	82	72
10.0	261	246	227	13.9	142	134	124	78	174	164	151	17.0	95	89	83	72
10.5	242	228	211	14.4	146	137	127	79	162	152	141	17.6	97	92	85	72
11.0	226	213	197	14.9	149	140	130	79	151	142	131	18.3	99	94	87	72

Table 65: Stocking levels for Douglas-fir in the ABGR/VASC–LIBO2 plant association (full stocking = 347).

	UPPER MANAGEMENT ZONE (SDI = 260)								LOWER MANAGEMENT ZONE (SDI = 174)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	211	199	184	15.4	152	144	133	79	141	133	123	18.9	102	96	88	73
12.0	198	187	173	15.9	156	147	136	80	132	124	115	19.5	104	98	90	73
12.5	186	175	162	16.4	159	150	138	80	124	117	108	20.1	106	100	92	74
13.0	176	165	153	16.9	162	152	141	80	117	110	102	20.7	108	102	94	74
13.5	166	156	144	17.4	165	155	144	81	111	104	96	21.3	110	104	96	74
14.0	157	148	137	17.9	168	158	146	81	105	99	91	21.9	112	105	97	74
14.5	149	140	130	18.4	171	161	149	81	99	93	86	22.5	114	107	99	75
15.0	142	133	123	18.9	174	163	151	81	94	89	82	23.1	116	109	101	75
15.5	135	127	117	19.3	176	166	154	82	90	85	78	23.7	118	111	102	75
16.0	128	121	112	19.8	179	169	156	82	86	81	75	24.2	119	113	104	75
16.5	123	115	107	20.3	182	171	158	82	82	77	71	24.8	121	114	106	76
17.0	117	110	102	20.7	185	174	161	82	78	74	68	25.4	123	116	107	76
17.5	112	106	98	21.2	187	176	163	83	75	70	65	25.9	125	118	109	76
18.0	107	101	94	21.6	190	179	165	83	72	67	62	26.5	127	119	110	76
18.5	103	97	90	22.1	192	181	168	83	69	65	60	27.1	128	121	112	77
19.0	99	93	86	22.5	195	184	170	83	66	62	57	27.6	130	122	113	77
19.5	95	90	83	23.0	197	186	172	84	63	60	55	28.1	132	124	115	77
20.0	92	86	80	23.4	200	188	174	84	61	58	53	28.7	133	125	116	77
20.5	88	83	77	23.9	202	191	176	84	59	55	51	29.2	135	127	117	77
21.0	85	80	74	24.3	205	193	178	84	57	53	49	29.8	137	129	119	78
21.5	82	77	72	24.7	207	195	180	84	55	52	48	30.3	138	130	120	78
22.0	79	75	69	25.2	210	197	182	84	53	50	46	30.8	140	131	122	78
22.5	77	72	67	25.6	212	199	184	85	51	48	45	31.4	141	133	123	78
23.0	74	70	65	26.0	214	202	186	85	49	47	43	31.9	143	134	124	78
23.5	72	68	63	26.5	216	204	188	85	48	45	42	32.4	144	136	126	78
24.0	70	66	61	26.9	219	206	190	85	46	44	40	32.9	146	137	127	79
24.5	67	64	59	27.3	221	208	192	85	45	42	39	33.4	147	139	128	79
25.0	65	62	57	27.7	223	210	194	85	44	41	38	34.0	149	140	129	79
25.5	64	60	55	28.1	225	212	196	86	42	40	37	34.5	150	141	131	79
26.0	62	58	54	28.6	227	214	198	86	41	39	36	35.0	152	143	132	79
26.5	60	56	52	29.0	230	216	200	86	40	38	35	35.5	153	144	133	79
27.0	58	55	51	29.4	232	218	202	86	39	37	34	36.0	154	145	134	80
27.5	57	53	49	29.8	234	220	203	86	38	36	33	36.5	156	147	136	80
28.0	55	52	48	30.2	236	222	205	86	37	35	32	37.0	157	148	137	80
28.5	54	51	47	30.6	238	224	207	87	36	34	31	37.5	159	149	138	80
29.0	52	49	46	31.0	240	226	209	87	35	33	30	38.0	160	151	139	80
30.0	50	47	43	31.8	244	230	212	87	33	31	29	39.0	163	153	142	80

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 66: Stocking levels for western larch in the ABGR/VASC–LIBO2 plant association (full stocking = 253).

	UPPER MANAGEMENT ZONE (SDI = 190)								LOWER MANAGEMENT ZONE (SDI = 127)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	10194	9598	8875	2.2	56	52	48	53	6796	6399	5917	2.7	37	35	32	46
1.2	7437	7002	6474	2.6	58	55	51	54	4958	4668	4316	3.2	39	37	34	47
1.4	5696	5363	4959	3.0	61	57	53	55	3797	3575	3306	3.6	41	38	35	47
1.6	4521	4257	3936	3.3	63	59	55	55	3014	2838	2624	4.1	42	40	37	48
1.8	3688	3472	3210	3.7	65	61	57	56	2458	2315	2140	4.5	43	41	38	49
2.0	3073	2893	2675	4.0	67	63	58	56	2049	1929	1784	5.0	45	42	39	49
2.2	2606	2454	2269	4.4	69	65	60	57	1737	1636	1513	5.4	46	43	40	50
2.4	2242	2111	1952	4.7	70	66	61	57	1495	1407	1301	5.8	47	44	41	50
2.6	1952	1838	1699	5.1	72	68	63	58	1301	1225	1133	6.2	48	45	42	50
2.8	1717	1617	1495	5.4	73	69	64	58	1145	1078	997	6.6	49	46	43	51
3.0	1524	1435	1327	5.7	75	70	65	58	1016	956	884	7.0	50	47	43	51
3.2	1363	1283	1187	6.1	76	72	66	59	909	855	791	7.4	51	48	44	51
3.4	1227	1155	1068	6.4	77	73	67	59	818	770	712	7.8	52	49	45	52
3.6	1112	1047	968	6.7	79	74	68	59	741	698	645	8.2	52	49	46	52
3.8	1012	953	881	7.0	80	75	69	59	675	635	588	8.6	53	50	46	52
4.0	926	872	807	7.4	81	76	70	60	618	581	538	9.0	54	51	47	52
4.2	851	802	741	7.7	82	77	71	60	568	534	494	9.4	55	51	48	53
4.4	786	740	684	8.0	83	78	72	60	524	493	456	9.8	55	52	48	53
4.6	727	685	633	8.3	84	79	73	60	485	457	422	10.2	56	53	49	53
4.8	676	636	588	8.6	85	80	74	61	451	424	392	10.6	57	53	49	53
5.0	630	593	548	8.9	86	81	75	61	420	395	365	10.9	57	54	50	53
5.2	588	554	512	9.2	87	82	76	61	392	369	342	11.3	58	54	50	54
5.4	551	519	480	9.6	88	83	76	61	367	346	320	11.7	58	55	51	54
5.6	518	487	451	9.9	89	83	77	61	345	325	300	12.1	59	56	51	54
5.8	487	459	424	10.2	89	84	78	61	325	306	283	12.4	60	56	52	54
6.0	459	432	400	10.5	90	85	79	62	306	288	267	12.8	60	57	52	54
6.2	434	409	378	10.8	91	86	79	62	289	272	252	13.2	61	57	53	55
6.4	411	387	358	11.1	92	86	80	62	274	258	238	13.6	61	58	53	55
6.6	390	367	339	11.4	93	87	81	62	260	245	226	13.9	62	58	54	55
6.8	370	348	322	11.7	93	88	81	62	247	232	215	14.3	62	59	54	55
7.0	352	331	306	12.0	94	89	82	62	235	221	204	14.6	63	59	55	55
7.2	335	315	292	12.3	95	89	82	63	223	210	194	15.0	63	59	55	55
7.4	320	301	278	12.5	95	90	83	63	213	201	185	15.4	64	60	55	55
7.6	305	287	266	12.8	96	91	84	63	203	192	177	15.7	64	60	56	56
7.8	292	275	254	13.1	97	91	84	63	195	183	169	16.1	65	61	56	56
8.0	279	263	243	13.4	97	92	85	63	186	175	162	16.4	65	61	57	56
8.2	268	252	233	13.7	98	92	85	63	178	168	155	16.8	65	62	57	56
8.4	257	242	223	14.0	99	93	86	63	171	161	149	17.1	66	62	57	56
8.6	246	232	215	14.3	99	94	87	63	164	155	143	17.5	66	62	58	56
8.8	237	223	206	14.6	100	94	87	63	158	149	137	17.8	67	63	58	56
9.0	228	214	198	14.9	101	95	88	64	152	143	132	18.2	67	63	58	56
9.2	219	206	191	15.1	101	95	88	64	146	138	127	18.5	67	64	59	56
9.4	211	199	184	15.4	102	96	89	64	141	133	123	18.9	68	64	59	57
9.6	204	192	177	15.7	102	96	89	64	136	128	118	19.2	68	64	59	57
9.8	197	185	171	16.0	103	97	90	64	131	123	114	19.6	69	65	60	57
10.0	190	179	165	16.3	104	97	90	64	127	119	110	19.9	69	65	60	57
10.5	174	164	152	17.0	105	99	91	64	116	110	101	20.8	70	66	61	57
11.0	161	152	140	17.7	106	100	92	65	107	101	93	21.6	71	67	62	57

Table 66: Stocking levels for western larch in the ABGR/VASC–LIBO2 plant association (full stocking = 253).

	UPPER MANAGEMENT ZONE (SDI = 190)								LOWER MANAGEMENT ZONE (SDI = 127)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	149	140	130	18.4	108	101	94	65	99	94	87	22.5	72	67	62	58
12.0	138	130	121	19.1	109	102	95	65	92	87	80	23.3	73	68	63	58
12.5	129	121	112	19.7	110	104	96	65	86	81	75	24.2	73	69	64	58
13.0	121	114	105	20.4	111	105	97	65	80	76	70	25.0	74	70	65	58
13.5	113	106	98	21.1	112	106	98	66	75	71	66	25.8	75	70	65	58
14.0	106	100	92	21.8	113	107	99	66	71	67	62	26.7	76	71	66	58
14.5	100	94	87	22.4	114	108	100	66	67	63	58	27.5	76	72	66	59
15.0	94	89	82	23.1	116	109	101	66	63	59	55	28.3	77	73	67	59
15.5	89	84	77	23.8	117	110	101	66	59	56	52	29.1	78	73	68	59
16.0	84	79	73	24.4	118	111	102	66	56	53	49	29.9	78	74	68	59
16.5	80	75	69	25.1	119	112	103	67	53	50	46	30.7	79	74	69	59
17.0	76	71	66	25.8	119	112	104	67	51	48	44	31.5	80	75	69	59
17.5	72	68	63	26.4	120	113	105	67	48	45	42	32.4	80	76	70	60
18.0	69	65	60	27.1	121	114	106	67	46	43	40	33.1	81	76	70	60
18.5	65	62	57	27.7	122	115	106	67	44	41	38	33.9	81	77	71	60
19.0	63	59	54	28.4	123	116	107	67	42	39	36	34.7	82	77	71	60
19.5	60	56	52	29.0	124	117	108	67	40	38	35	35.5	83	78	72	60
20.0	57	54	50	29.6	125	118	109	67	38	36	33	36.3	83	78	72	60
20.5	55	52	48	30.3	126	118	109	68	37	34	32	37.1	84	79	73	60
21.0	53	50	46	30.9	126	119	110	68	35	33	31	37.9	84	79	73	60
21.5	50	48	44	31.6	127	120	111	68	34	32	29	38.7	85	80	74	61
22.0	49	46	42	32.2	128	121	112	68	32	30	28	39.4	85	80	74	61
22.5	47	44	41	32.8	129	121	112	68	31	29	27	40.2	86	81	75	61
23.0	45	42	39	33.5	130	122	113	68	30	28	26	41.0	86	81	75	61
23.5	43	41	38	34.1	130	123	114	68	29	27	25	41.7	87	82	76	61
24.0	42	39	36	34.7	131	123	114	68	28	26	24	42.5	87	82	76	61
24.5	40	38	35	35.3	132	124	115	68	27	25	23	43.3	88	83	77	61
25.0	39	37	34	36.0	133	125	115	69	26	24	23	44.0	88	83	77	61
25.5	38	35	33	36.6	133	126	116	69	25	24	22	44.8	89	84	77	61
26.0	36	34	32	37.2	134	126	117	69	24	23	21	45.6	89	84	78	61
26.5	35	33	31	37.8	135	127	117	69	23	22	20	46.3	90	85	78	62
27.0	34	32	30	38.4	135	127	118	69	23	21	20	47.1	90	85	79	62
27.5	33	31	29	39.1	136	128	118	69	22	21	19	47.8	91	85	79	62
28.0	32	30	28	39.7	137	129	119	69	21	20	19	48.6	91	86	79	62
28.5	31	29	27	40.3	137	129	120	69	21	19	18	49.3	92	86	80	62
29.0	30	28	26	40.9	138	130	120	69	20	19	17	50.1	92	87	80	62
30.0	28	27	25	42.1	139	131	121	69	19	18	16	51.6	93	87	81	62

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 67: Stocking levels for lodgepole pine in the ABGR/VASC-LIBO2 plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59

Table 67: Stocking levels for lodgepole pine in the ABGR/VASC-LIBO2 plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 68: Stocking levels for Engelmann spruce in the ABGR/VASC−LIBO2 plant association (full stocking = 349).

	UPPER MANAGEMENT ZONE (SDI = 262)								LOWER MANAGEMENT ZONE (SDI = 175)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	13999	13180	12187	1.9	76	72	66	70	9333	8787	8125	2.3	51	48	44	63
1.2	10212	9615	8891	2.2	80	76	70	71	6808	6410	5927	2.7	53	50	47	64
1.4	7822	7364	6809	2.5	84	79	73	72	5214	4909	4540	3.1	56	52	49	65
1.6	6208	5845	5405	2.8	87	82	75	73	4139	3897	3603	3.5	58	54	50	66
1.8	5064	4768	4409	3.2	89	84	78	73	3376	3178	2939	3.9	60	56	52	66
2.0	4220	3973	3674	3.5	92	87	80	74	2813	2649	2449	4.2	61	58	53	67
2.2	3579	3369	3115	3.7	94	89	82	74	2386	2246	2077	4.6	63	59	55	67
2.4	3078	2898	2680	4.0	97	91	84	74	2052	1932	1787	5.0	64	61	56	67
2.6	2680	2524	2334	4.3	99	93	86	75	1787	1682	1556	5.3	66	62	57	68
2.8	2358	2220	2053	4.6	101	95	88	75	1572	1480	1368	5.7	67	63	59	68
3.0	2093	1970	1822	4.9	103	97	89	76	1395	1313	1215	6.0	68	64	60	68
3.2	1871	1762	1629	5.2	105	98	91	76	1248	1175	1086	6.3	70	66	61	69
3.4	1685	1587	1467	5.5	106	100	92	76	1123	1058	978	6.7	71	67	62	69
3.6	1526	1437	1329	5.7	108	102	94	76	1018	958	886	7.0	72	68	63	69
3.8	1390	1309	1210	6.0	109	103	95	77	927	873	807	7.4	73	69	64	70
4.0	1272	1198	1108	6.3	111	105	97	77	848	798	738	7.7	74	70	64	70
4.2	1169	1101	1018	6.6	112	106	98	77	779	734	679	8.0	75	71	65	70
4.4	1079	1016	939	6.8	114	107	99	77	719	677	626	8.4	76	71	66	70
4.6	999	940	870	7.1	115	109	100	78	666	627	580	8.7	77	72	67	70
4.8	928	874	808	7.4	117	110	102	78	619	582	539	9.0	78	73	68	71
5.0	865	814	753	7.6	118	111	103	78	576	543	502	9.3	79	74	68	71
5.2	808	761	703	7.9	119	112	104	78	539	507	469	9.7	79	75	69	71
5.4	757	713	659	8.2	120	113	105	78	505	475	439	10.0	80	76	70	71
5.6	711	669	619	8.4	122	114	106	78	474	446	413	10.3	81	76	71	71
5.8	669	630	582	8.7	123	116	107	79	446	420	388	10.6	82	77	71	72
6.0	631	594	549	8.9	124	117	108	79	421	396	366	10.9	83	78	72	72
6.2	596	561	519	9.2	125	118	109	79	397	374	346	11.3	83	78	73	72
6.4	564	531	491	9.4	126	119	110	79	376	354	327	11.6	84	79	73	72
6.6	535	504	466	9.7	127	120	111	79	357	336	310	11.9	85	80	74	72
6.8	508	478	442	10.0	128	121	112	79	339	319	295	12.2	85	80	74	72
7.0	483	455	421	10.2	129	122	112	79	322	303	280	12.5	86	81	75	72
7.2	460	433	401	10.5	130	122	113	80	307	289	267	12.8	87	82	76	73
7.4	439	413	382	10.7	131	123	114	80	293	275	255	13.1	87	82	76	73
7.6	419	395	365	11.0	132	124	115	80	279	263	243	13.4	88	83	77	73
7.8	401	377	349	11.2	133	125	116	80	267	251	233	13.7	89	83	77	73
8.0	383	361	334	11.5	134	126	117	80	256	241	223	14.0	89	84	78	73
8.2	367	346	320	11.7	135	127	117	80	245	231	213	14.3	90	85	78	73
8.4	352	332	307	11.9	136	128	118	80	235	221	205	14.6	90	85	79	73
8.6	338	319	295	12.2	137	129	119	80	226	212	196	14.9	91	86	79	73
8.8	325	306	283	12.4	137	129	120	81	217	204	189	15.2	92	86	80	74
9.0	313	294	272	12.7	138	130	120	81	209	196	182	15.5	92	87	80	74
9.2	301	284	262	12.9	139	131	121	81	201	189	175	15.8	93	87	81	74
9.4	290	273	253	13.2	140	132	122	81	193	182	168	16.1	93	88	81	74
9.6	280	263	244	13.4	141	132	122	81	186	176	162	16.4	94	88	82	74
9.8	270	254	235	13.7	141	133	123	81	180	169	157	16.7	94	89	82	74
10.0	261	245	227	13.9	142	134	124	81	174	164	151	17.0	95	89	83	74
10.5	240	226	209	14.5	144	136	125	81	160	150	139	17.7	96	90	84	74
11.0	221	208	192	15.1	146	137	127	82	147	139	128	18.5	97	92	85	75

Table 68: Stocking levels for Engelmann spruce in the ABGR/VASC−LIBO2 plant association (full stocking = 349).

	UPPER MANAGEMENT ZONE (SDI = 262)								LOWER MANAGEMENT ZONE (SDI = 175)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	205	193	178	15.7	148	139	129	82	136	128	119	19.2	98	93	86	75
12.0	190	179	166	16.3	149	141	130	82	127	119	110	19.9	100	94	87	75
12.5	177	167	154	16.8	151	142	131	82	118	111	103	20.6	101	95	88	75
13.0	166	156	144	17.4	153	144	133	82	110	104	96	21.3	102	96	89	75
13.5	155	146	135	18.0	154	145	134	83	103	97	90	22.1	103	97	89	76
14.0	146	137	127	18.6	156	147	136	83	97	91	85	22.8	104	98	90	76
14.5	137	129	119	19.2	157	148	137	83	91	86	80	23.5	105	99	91	76
15.0	129	122	113	19.7	159	149	138	83	86	81	75	24.2	106	100	92	76
15.5	122	115	106	20.3	160	151	139	83	81	77	71	24.9	107	100	93	76
16.0	116	109	101	20.9	161	152	141	83	77	73	67	25.5	108	101	94	76
16.5	110	103	95	21.4	163	153	142	84	73	69	64	26.2	109	102	94	76
17.0	104	98	91	22.0	164	154	143	84	69	65	60	26.9	109	103	95	77
17.5	99	93	86	22.5	165	156	144	84	66	62	57	27.6	110	104	96	77
18.0	94	89	82	23.1	167	157	145	84	63	59	55	28.3	111	105	97	77
18.5	90	85	78	23.7	168	158	146	84	60	56	52	29.0	112	105	97	77
19.0	86	81	75	24.2	169	159	147	84	57	54	50	29.6	113	106	98	77
19.5	82	77	71	24.8	170	160	148	84	55	52	48	30.3	114	107	99	77
20.0	79	74	68	25.3	171	161	149	84	52	49	46	31.0	114	108	100	77
20.5	75	71	66	25.8	173	162	150	85	50	47	44	31.7	115	108	100	77
21.0	72	68	63	26.4	174	164	151	85	48	45	42	32.3	116	109	101	78
21.5	69	65	60	26.9	175	165	152	85	46	44	40	33.0	117	110	101	78
22.0	67	63	58	27.5	176	166	153	85	44	42	39	33.6	117	110	102	78
22.5	64	60	56	28.0	177	167	154	85	43	40	37	34.3	118	111	103	78
23.0	62	58	54	28.6	178	168	155	85	41	39	36	35.0	119	112	103	78
23.5	59	56	52	29.1	179	169	156	85	40	37	35	35.6	119	112	104	78
24.0	57	54	50	29.6	180	170	157	85	38	36	33	36.3	120	113	105	78
24.5	55	52	48	30.2	181	170	158	85	37	35	32	36.9	121	114	105	78
25.0	53	50	47	30.7	182	171	159	85	36	34	31	37.6	121	114	106	78
25.5	52	49	45	31.2	183	172	159	86	34	32	30	38.2	122	115	106	79
26.0	50	47	43	31.7	184	173	160	86	33	31	29	38.9	123	116	107	79
26.5	48	45	42	32.3	185	174	161	86	32	30	28	39.5	123	116	107	79
27.0	47	44	41	32.8	186	175	162	86	31	29	27	40.2	124	117	108	79
27.5	45	43	39	33.3	187	176	163	86	30	28	26	40.8	125	117	108	79
28.0	44	41	38	33.8	188	177	163	86	29	28	25	41.5	125	118	109	79
28.5	43	40	37	34.4	189	178	164	86	28	27	25	42.1	126	118	109	79
29.0	41	39	36	34.9	190	178	165	86	28	26	24	42.7	126	119	110	79
30.0	39	37	34	35.9	191	180	167	86	26	24	23	44.0	128	120	111	79

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 69: Stocking levels for grand fir in the ABGR/VASC–LIBO2 plant association (full stocking = 494).

	UPPER MANAGEMENT ZONE (SDI = 371)								LOWER MANAGEMENT ZONE (SDI = 247)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	19868	18706	17297	1.6	108	102	94	78	13245	12471	11531	1.9	72	68	63	71
1.2	14493	13646	12618	1.9	114	107	99	79	9662	9097	8412	2.3	76	71	66	72
1.4	11101	10451	9664	2.1	119	112	103	80	7401	6968	6443	2.6	79	74	69	73
1.6	8811	8296	7671	2.4	123	116	107	80	5874	5530	5114	2.9	82	77	71	73
1.8	7187	6766	6257	2.6	127	120	111	81	4791	4511	4171	3.2	85	80	74	74
2.0	5989	5639	5214	2.9	131	123	114	82	3993	3759	3476	3.5	87	82	76	74
2.2	5079	4782	4422	3.1	134	126	117	82	3386	3188	2948	3.9	89	84	78	75
2.4	4369	4113	3804	3.4	137	129	119	82	2913	2742	2536	4.2	92	86	80	75
2.6	3804	3582	3312	3.6	140	132	122	83	2536	2388	2208	4.5	94	88	81	76
2.8	3346	3151	2913	3.9	143	135	125	83	2231	2100	1942	4.7	95	90	83	76
3.0	2970	2796	2586	4.1	146	137	127	83	1980	1864	1724	5.0	97	92	85	76
3.2	2656	2501	2312	4.4	148	140	129	84	1771	1667	1542	5.3	99	93	86	77
3.4	2392	2252	2082	4.6	151	142	131	84	1594	1501	1388	5.6	101	95	88	77
3.6	2166	2040	1886	4.8	153	144	133	84	1444	1360	1257	5.9	102	96	89	77
3.8	1973	1858	1718	5.0	155	146	135	85	1315	1238	1145	6.2	104	98	90	77
4.0	1805	1700	1572	5.3	158	148	137	85	1204	1133	1048	6.5	105	99	91	78
4.2	1659	1562	1445	5.5	160	150	139	85	1106	1042	963	6.7	106	100	93	78
4.4	1531	1441	1333	5.7	162	152	141	85	1021	961	889	7.0	108	101	94	78
4.6	1418	1335	1234	6.0	164	154	142	86	945	890	823	7.3	109	103	95	78
4.8	1317	1240	1147	6.2	166	156	144	86	878	827	764	7.6	110	104	96	78
5.0	1227	1155	1068	6.4	167	158	146	86	818	770	712	7.8	112	105	97	79
5.2	1147	1080	998	6.6	169	159	147	86	765	720	666	8.1	113	106	98	79
5.4	1074	1011	935	6.8	171	161	149	86	716	674	624	8.4	114	107	99	79
5.6	1009	950	878	7.1	173	162	150	87	673	633	585	8.6	115	108	100	79
5.8	949	894	827	7.3	174	164	152	87	633	596	551	8.9	116	109	101	79
6.0	895	843	779	7.5	176	166	153	87	597	562	520	9.2	117	110	102	80
6.2	846	796	736	7.7	177	167	154	87	564	531	491	9.4	118	111	103	80
6.4	801	754	697	7.9	179	168	156	87	534	503	465	9.7	119	112	104	80
6.6	759	715	661	8.1	180	170	157	87	506	477	441	10.0	120	113	105	80
6.8	721	679	628	8.4	182	171	158	87	481	453	418	10.2	121	114	106	80
7.0	686	646	597	8.6	183	173	160	88	457	430	398	10.5	122	115	106	80
7.2	653	615	569	8.8	185	174	161	88	435	410	379	10.7	123	116	107	80
7.4	623	586	542	9.0	186	175	162	88	415	391	362	11.0	124	117	108	81
7.6	595	560	518	9.2	187	176	163	88	397	373	345	11.3	125	118	109	81
7.8	569	535	495	9.4	189	178	164	88	379	357	330	11.5	126	118	110	81
8.0	544	512	474	9.6	190	179	165	88	363	342	316	11.8	127	119	110	81
8.2	522	491	454	9.8	191	180	167	88	348	327	303	12.0	128	120	111	81
8.4	500	471	435	10.0	193	181	168	88	333	314	290	12.3	128	121	112	81
8.6	480	452	418	10.2	194	182	169	89	320	301	279	12.5	129	122	112	81
8.8	462	435	402	10.4	195	184	170	89	308	290	268	12.8	130	122	113	81
9.0	444	418	386	10.6	196	185	171	89	296	279	258	13.0	131	123	114	82
9.2	427	402	372	10.8	197	186	172	89	285	268	248	13.3	132	124	115	82
9.4	412	388	358	11.1	198	187	173	89	275	258	239	13.5	132	125	115	82
9.6	397	374	346	11.3	200	188	174	89	265	249	230	13.8	133	125	116	82
9.8	383	361	334	11.5	201	189	175	89	255	240	222	14.0	134	126	116	82
10.0	370	348	322	11.7	202	190	176	89	247	232	215	14.3	135	127	117	82
10.5	340	320	296	12.2	204	192	178	90	227	213	197	14.9	136	128	119	82
11.0	314	295	273	12.7	207	195	180	90	209	197	182	15.5	138	130	120	83

Table 69: Stocking levels for grand fir in the ABGR/VASC–LIBO2 plant association (full stocking = 494).

	UPPER MANAGEMENT ZONE (SDI = 371)								LOWER MANAGEMENT ZONE (SDI = 247)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	291	274	253	13.2	210	197	182	90	194	182	169	16.1	140	132	122	83
12.0	270	254	235	13.7	212	200	185	90	180	169	157	16.7	141	133	123	83
12.5	251	237	219	14.1	214	202	187	90	168	158	146	17.3	143	135	124	83
13.0	235	221	205	14.6	217	204	189	91	157	147	136	17.9	144	136	126	83
13.5	220	207	192	15.1	219	206	190	91	147	138	128	18.5	146	137	127	83
14.0	207	195	180	15.6	221	208	192	91	138	130	120	19.1	147	139	128	84
14.5	195	183	169	16.1	223	210	194	91	130	122	113	19.7	149	140	129	84
15.0	183	173	160	16.6	225	212	196	91	122	115	106	20.3	150	141	131	84
15.5	173	163	151	17.0	227	214	198	91	116	109	101	20.9	151	143	132	84
16.0	164	154	143	17.5	229	216	199	92	109	103	95	21.4	153	144	133	84
16.5	156	146	135	18.0	231	217	201	92	104	98	90	22.0	154	145	134	84
17.0	148	139	129	18.5	233	219	203	92	98	93	86	22.6	155	146	135	85
17.5	141	132	122	18.9	235	221	204	92	94	88	82	23.2	156	147	136	85
18.0	134	126	117	19.4	236	223	206	92	89	84	78	23.7	158	148	137	85
18.5	128	120	111	19.9	238	224	207	92	85	80	74	24.3	159	150	138	85
19.0	122	115	106	20.3	240	226	209	92	81	76	71	24.9	160	151	139	85
19.5	117	110	101	20.8	242	228	210	93	78	73	68	25.4	161	152	140	85
20.0	112	105	97	21.2	243	229	212	93	74	70	65	26.0	162	153	141	85
20.5	107	101	93	21.7	245	231	213	93	71	67	62	26.6	163	154	142	86
21.0	102	97	89	22.2	247	232	215	93	68	64	59	27.1	164	155	143	86
21.5	98	93	86	22.6	248	234	216	93	66	62	57	27.7	165	156	144	86
22.0	95	89	82	23.1	250	235	217	93	63	59	55	28.2	166	157	145	86
22.5	91	86	79	23.5	251	236	219	93	61	57	53	28.8	167	158	146	86
23.0	88	82	76	24.0	253	238	220	93	58	55	51	29.4	168	159	147	86
23.5	84	79	73	24.4	254	239	221	93	56	53	49	29.9	169	160	148	86
24.0	81	77	71	24.9	256	241	223	94	54	51	47	30.5	170	160	148	86
24.5	79	74	68	25.3	257	242	224	94	52	49	46	31.0	171	161	149	86
25.0	76	71	66	25.8	258	243	225	94	51	48	44	31.5	172	162	150	86
25.5	73	69	64	26.2	260	245	226	94	49	46	43	32.1	173	163	151	87
26.0	71	67	62	26.6	261	246	227	94	47	44	41	32.6	174	164	152	87
26.5	69	65	60	27.1	263	247	229	94	46	43	40	33.2	175	165	152	87
27.0	66	62	58	27.5	264	248	230	94	44	42	39	33.7	176	166	153	87
27.5	64	61	56	28.0	265	250	231	94	43	40	37	34.3	177	166	154	87
28.0	62	59	54	28.4	266	251	232	94	42	39	36	34.8	178	167	155	87
28.5	60	57	53	28.9	268	252	233	94	40	38	35	35.3	178	168	155	87
29.0	59	55	51	29.3	269	253	234	94	39	37	34	35.9	179	169	156	87
30.0	55	52	48	30.2	271	256	236	95	37	35	32	36.9	181	170	158	87

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 70: Stocking levels for subalpine fir in the ABGR/VASC−LIBO2 plant association (full stocking = 184).

	UPPER MANAGEMENT ZONE (SDI = 138)								LOWER MANAGEMENT ZONE (SDI = 92)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	7380	6948	6425	2.6	40	38	35	59	4920	4632	4283	3.2	27	25	23	52
1.2	5384	5069	4687	3.1	42	40	37	60	3589	3379	3125	3.7	28	27	25	53
1.4	4123	3882	3590	3.5	44	42	38	61	2749	2588	2393	4.3	29	28	26	54
1.6	3273	3081	2849	3.9	46	43	40	61	2182	2054	1900	4.8	30	29	27	55
1.8	2670	2513	2324	4.3	47	44	41	62	1780	1676	1549	5.3	31	30	27	55
2.0	2225	2095	1937	4.8	49	46	42	63	1483	1396	1291	5.8	32	30	28	56
2.2	1887	1776	1642	5.2	50	47	43	63	1258	1184	1095	6.3	33	31	29	56
2.4	1623	1528	1413	5.6	51	48	44	63	1082	1019	942	6.8	34	32	30	56
2.6	1413	1330	1230	6.0	52	49	45	64	942	887	820	7.3	35	33	30	57
2.8	1243	1170	1082	6.4	53	50	46	64	829	780	721	7.8	35	33	31	57
3.0	1103	1039	960	6.8	54	51	47	64	735	692	640	8.3	36	34	31	57
3.2	987	929	859	7.1	55	52	48	65	658	619	573	8.7	37	35	32	58
3.4	888	836	773	7.5	56	53	49	65	592	558	516	9.2	37	35	33	58
3.6	805	758	701	7.9	57	54	50	65	537	505	467	9.7	38	36	33	58
3.8	733	690	638	8.3	58	54	50	66	489	460	425	10.1	38	36	34	59
4.0	671	631	584	8.7	59	55	51	66	447	421	389	10.6	39	37	34	59
4.2	616	580	537	9.0	59	56	52	66	411	387	358	11.1	40	37	34	59
4.4	569	535	495	9.4	60	57	52	66	379	357	330	11.5	40	38	35	59
4.6	527	496	458	9.8	61	57	53	66	351	331	306	12.0	41	38	35	59
4.8	489	461	426	10.1	61	58	54	67	326	307	284	12.4	41	39	36	60
5.0	456	429	397	10.5	62	59	54	67	304	286	265	12.9	41	39	36	60
5.2	426	401	371	10.9	63	59	55	67	284	267	247	13.3	42	39	36	60
5.4	399	376	347	11.2	63	60	55	67	266	250	232	13.8	42	40	37	60
5.6	375	353	326	11.6	64	60	56	67	250	235	217	14.2	43	40	37	60
5.8	353	332	307	11.9	65	61	56	67	235	221	205	14.6	43	41	38	61
6.0	333	313	290	12.3	65	61	57	68	222	209	193	15.1	44	41	38	61
6.2	314	296	274	12.7	66	62	57	68	209	197	182	15.5	44	41	38	61
6.4	297	280	259	13.0	66	63	58	68	198	187	173	15.9	44	42	39	61
6.6	282	266	246	13.4	67	63	58	68	188	177	164	16.4	45	42	39	61
6.8	268	252	233	13.7	68	64	59	68	179	168	155	16.8	45	42	39	61
7.0	255	240	222	14.1	68	64	59	68	170	160	148	17.2	45	43	40	61
7.2	243	228	211	14.4	69	65	60	68	162	152	141	17.6	46	43	40	62
7.4	231	218	201	14.7	69	65	60	69	154	145	134	18.1	46	43	40	62
7.6	221	208	192	15.1	70	66	61	69	147	139	128	18.5	46	44	40	62
7.8	211	199	184	15.4	70	66	61	69	141	133	123	18.9	47	44	41	62
8.0	202	190	176	15.8	71	66	61	69	135	127	117	19.3	47	44	41	62
8.2	194	182	169	16.1	71	67	62	69	129	122	112	19.7	47	45	41	62
8.4	186	175	162	16.5	72	67	62	69	124	117	108	20.2	48	45	42	62
8.6	178	168	155	16.8	72	68	63	69	119	112	104	20.6	48	45	42	62
8.8	171	161	149	17.1	72	68	63	69	114	108	100	21.0	48	45	42	62
9.0	165	155	144	17.5	73	69	63	70	110	104	96	21.4	49	46	42	63
9.2	159	149	138	17.8	73	69	64	70	106	100	92	21.8	49	46	43	63
9.4	153	144	133	18.1	74	69	64	70	102	96	89	22.2	49	46	43	63
9.6	147	139	128	18.5	74	70	65	70	98	93	86	22.6	49	47	43	63
9.8	142	134	124	18.8	75	70	65	70	95	89	83	23.0	50	47	43	63
10.0	137	129	120	19.1	75	71	65	70	92	86	80	23.4	50	47	44	63
10.5	126	119	110	20.0	76	72	66	70	84	79	73	24.4	51	48	44	63
11.0	117	110	101	20.8	77	72	67	70	78	73	68	25.4	51	48	45	63

Table 70: Stocking levels for subalpine fir in the ABGR/VASC−LIBO2 plant association (full stocking = 184).

	UPPER MANAGEMENT ZONE (SDI = 138)								LOWER MANAGEMENT ZONE (SDI = 92)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	108	102	94	21.6	78	73	68	71	72	68	63	26.4	52	49	45	64
12.0	100	94	87	22.4	79	74	69	71	67	63	58	27.4	52	49	46	64
12.5	93	88	81	23.2	80	75	69	71	62	59	54	28.4	53	50	46	64
13.0	87	82	76	24.0	80	76	70	71	58	55	51	29.4	54	50	47	64
13.5	82	77	71	24.8	81	77	71	71	55	51	47	30.4	54	51	47	64
14.0	77	72	67	25.6	82	77	71	72	51	48	45	31.3	55	52	48	65
14.5	72	68	63	26.4	83	78	72	72	48	45	42	32.3	55	52	48	65
15.0	68	64	59	27.2	84	79	73	72	45	43	40	33.3	56	52	49	65
15.5	64	61	56	28.0	84	79	73	72	43	40	37	34.2	56	53	49	65
16.0	61	57	53	28.7	85	80	74	72	41	38	35	35.2	57	53	49	65
16.5	58	54	50	29.5	86	81	75	72	39	36	34	36.1	57	54	50	65
17.0	55	52	48	30.3	86	81	75	73	37	34	32	37.1	58	54	50	65
17.5	52	49	45	31.0	87	82	76	73	35	33	30	38.0	58	55	51	66
18.0	50	47	43	31.8	88	83	76	73	33	31	29	39.0	59	55	51	66
18.5	47	45	41	32.6	88	83	77	73	32	30	28	39.9	59	56	51	66
19.0	45	43	39	33.3	89	84	78	73	30	28	26	40.8	59	56	52	66
19.5	43	41	38	34.1	90	85	78	73	29	27	25	41.8	60	56	52	66
20.0	41	39	36	34.8	90	85	79	73	28	26	24	42.7	60	57	52	66
20.5	40	37	35	35.6	91	86	79	73	26	25	23	43.6	61	57	53	66
21.0	38	36	33	36.3	92	86	80	74	25	24	22	44.5	61	57	53	66
21.5	37	34	32	37.1	92	87	80	74	24	23	21	45.4	61	58	53	67
22.0	35	33	31	37.8	93	87	81	74	23	22	20	46.3	62	58	54	67
22.5	34	32	29	38.6	93	88	81	74	23	21	20	47.3	62	59	54	67
23.0	33	31	28	39.3	94	88	82	74	22	20	19	48.2	63	59	54	67
23.5	31	30	27	40.1	94	89	82	74	21	20	18	49.1	63	59	55	67
24.0	30	28	26	40.8	95	89	83	74	20	19	18	50.0	63	60	55	67
24.5	29	27	25	41.5	95	90	83	74	19	18	17	50.9	64	60	55	67
25.0	28	27	25	42.3	96	90	84	74	19	18	16	51.8	64	60	56	67
25.5	27	26	24	43.0	97	91	84	74	18	17	16	52.7	64	61	56	67
26.0	26	25	23	43.7	97	91	84	75	18	17	15	53.5	65	61	56	67
26.5	25	24	22	44.4	98	92	85	75	17	16	15	54.4	65	61	57	68
27.0	25	23	21	45.2	98	92	85	75	16	15	14	55.3	65	62	57	68
27.5	24	22	21	45.9	98	93	86	75	16	15	14	56.2	66	62	57	68
28.0	23	22	20	46.6	99	93	86	75	15	15	13	57.1	66	62	57	68
28.5	22	21	20	47.3	99	94	87	75	15	14	13	58.0	66	62	58	68
29.0	22	21	19	48.1	100	94	87	75	15	14	13	58.9	67	63	58	68
30.0	21	19	18	49.5	101	95	88	75	14	13	12	60.6	67	63	59	68

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 71: Stocking levels for ponderosa pine in the ABGR/VASC plant association (full stocking = 172).

	UPPER MANAGEMENT ZONE (SDI = 101)								LOWER MANAGEMENT ZONE (SDI = 68)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	5914	5500	5149	2.9	32	30	28	36	3963	3685	3450	3.6	22	20	19	29
1.2	4283	3983	3729	3.4	34	31	29	37	2870	2669	2498	4.2	23	21	20	29
1.4	3260	3032	2838	3.9	35	32	30	37	2184	2032	1902	4.8	23	22	20	30
1.6	2574	2394	2241	4.4	36	33	31	38	1725	1604	1501	5.4	24	22	21	31
1.8	2090	1943	1819	4.9	37	34	32	38	1400	1302	1219	6.0	25	23	22	31
2.0	1734	1613	1510	5.4	38	35	33	39	1162	1081	1012	6.6	25	24	22	32
2.2	1465	1362	1275	5.9	39	36	34	39	982	913	855	7.2	26	24	23	32
2.4	1256	1168	1093	6.3	39	37	34	40	841	783	733	7.7	26	25	23	32
2.6	1090	1014	949	6.8	40	37	35	40	730	679	636	8.3	27	25	23	33
2.8	956	889	832	7.3	41	38	36	40	640	596	558	8.9	27	25	24	33
3.0	846	787	737	7.7	42	39	36	41	567	527	494	9.4	28	26	24	33
3.2	755	702	657	8.2	42	39	37	41	506	470	440	10.0	28	26	25	34
3.4	678	630	590	8.6	43	40	37	41	454	422	395	10.5	29	27	25	34
3.6	613	570	533	9.1	43	40	38	41	411	382	357	11.1	29	27	25	34
3.8	557	518	485	9.5	44	41	38	42	373	347	325	11.6	29	27	26	34
4.0	508	473	443	9.9	44	41	39	42	341	317	297	12.2	30	28	26	34
4.2	466	434	406	10.4	45	42	39	42	312	291	272	12.7	30	28	26	35
4.4	430	399	374	10.8	45	42	39	42	288	268	251	13.2	30	28	26	35
4.6	397	369	346	11.3	46	43	40	42	266	247	232	13.8	31	29	27	35
4.8	368	342	321	11.7	46	43	40	43	247	229	215	14.3	31	29	27	35
5.0	343	319	298	12.1	47	43	41	43	230	213	200	14.8	31	29	27	35
5.2	320	297	278	12.5	47	44	41	43	214	199	186	15.3	32	29	27	36
5.4	299	278	260	13.0	48	44	41	43	200	186	174	15.8	32	30	28	36
5.6	280	261	244	13.4	48	45	42	43	188	175	163	16.4	32	30	28	36
5.8	263	245	229	13.8	48	45	42	43	176	164	154	16.9	32	30	28	36
6.0	248	231	216	14.2	49	45	42	43	166	155	145	17.4	33	30	28	36
6.2	234	218	204	14.7	49	46	43	44	157	146	137	17.9	33	31	29	36
6.4	221	206	193	15.1	49	46	43	44	148	138	129	18.4	33	31	29	36
6.6	210	195	182	15.5	50	46	43	44	140	131	122	18.9	33	31	29	37
6.8	199	185	173	15.9	50	47	44	44	133	124	116	19.4	34	31	29	37
7.0	189	176	164	16.3	50	47	44	44	127	118	110	19.9	34	31	29	37
7.2	180	167	156	16.7	51	47	44	44	120	112	105	20.4	34	32	30	37
7.4	171	159	149	17.1	51	48	45	44	115	107	100	20.9	34	32	30	37
7.6	163	152	142	17.6	51	48	45	44	109	102	95	21.4	34	32	30	37
7.8	156	145	136	18.0	52	48	45	45	104	97	91	21.9	35	32	30	37
8.0	149	139	130	18.4	52	48	45	45	100	93	87	22.4	35	32	30	37
8.2	143	133	124	18.8	52	49	46	45	96	89	83	22.9	35	33	31	37
8.4	137	127	119	19.2	53	49	46	45	92	85	80	23.4	35	33	31	38
8.6	131	122	114	19.6	53	49	46	45	88	82	77	23.9	35	33	31	38
8.8	126	117	110	20.0	53	49	46	45	84	78	73	24.4	36	33	31	38
9.0	121	113	105	20.4	53	50	47	45	81	75	71	24.9	36	33	31	38
9.2	116	108	101	20.8	54	50	47	45	78	73	68	25.4	36	33	31	38
9.4	112	104	98	21.2	54	50	47	45	75	70	65	25.9	36	34	32	38
9.6	108	100	94	21.6	54	50	47	45	72	67	63	26.4	36	34	32	38
9.8	104	97	91	22.0	55	51	47	46	70	65	61	26.9	37	34	32	38
10.0	100	93	87	22.4	55	51	48	46	67	63	59	27.3	37	34	32	38
10.5	92	86	80	23.4	55	52	48	46	62	57	54	28.5	37	35	32	38
11.0	85	79	74	24.3	56	52	49	46	57	53	49	29.7	38	35	33	39

Table 71: Stocking levels for ponderosa pine in the ABGR/VASC plant association (full stocking = 172).

	UPPER MANAGEMENT ZONE (SDI = 101)								LOWER MANAGEMENT ZONE (SDI = 68)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	78	73	68	25.3	57	53	49	46	53	49	46	30.9	38	35	33	39
12.0	73	68	63	26.3	57	53	50	46	49	45	42	32.1	38	36	33	39
12.5	68	63	59	27.3	58	54	50	47	45	42	39	33.3	39	36	34	39
13.0	63	59	55	28.2	58	54	51	47	42	39	37	34.5	39	36	34	39
13.5	59	55	51	29.2	59	55	51	47	40	37	34	35.7	39	37	34	40
14.0	55	51	48	30.1	59	55	52	47	37	34	32	36.8	40	37	35	40
14.5	52	48	45	31.1	60	55	52	47	35	32	30	38.0	40	37	35	40
15.0	49	46	43	32.0	60	56	52	47	33	31	29	39.1	40	37	35	40
15.5	46	43	40	33.0	61	56	53	47	31	29	27	40.3	41	38	35	40
16.0	44	41	38	33.9	61	57	53	48	29	27	25	41.4	41	38	36	40
16.5	41	38	36	34.9	61	57	54	48	28	26	24	42.6	41	38	36	40
17.0	39	37	34	35.8	62	58	54	48	26	24	23	43.7	41	39	36	41
17.5	37	35	32	36.7	62	58	54	48	25	23	22	44.9	42	39	36	41
18.0	35	33	31	37.6	63	58	55	48	24	22	21	46.0	42	39	37	41
18.5	34	31	29	38.6	63	59	55	48	23	21	20	47.1	42	39	37	41
19.0	32	30	28	39.5	63	59	55	48	22	20	19	48.2	43	40	37	41
19.5	31	29	27	40.4	64	59	56	48	21	19	18	49.4	43	40	37	41
20.0	29	27	26	41.3	64	60	56	49	20	18	17	50.5	43	40	37	41
20.5	28	26	25	42.2	65	60	56	49	19	18	16	51.6	43	40	38	41
21.0	27	25	24	43.2	65	60	57	49	18	17	16	52.7	44	40	38	41
21.5	26	24	23	44.1	65	61	57	49	17	16	15	53.8	44	41	38	41
22.0	25	23	22	45.0	66	61	57	49	17	16	15	54.9	44	41	38	42
22.5	24	22	21	45.9	66	61	57	49	16	15	14	56.0	44	41	39	42
23.0	23	21	20	46.8	66	62	58	49	15	14	13	57.1	44	41	39	42
23.5	22	21	19	47.7	67	62	58	49	15	14	13	58.2	45	42	39	42
24.0	21	20	19	48.6	67	62	58	49	14	13	12	59.3	45	42	39	42
24.5	21	19	18	49.5	67	63	59	49	14	13	12	60.4	45	42	39	42
25.0	20	18	17	50.4	68	63	59	49	13	12	12	61.5	45	42	39	42
25.5	19	18	17	51.2	68	63	59	50	13	12	11	62.6	46	42	40	42
26.0	19	17	16	52.1	68	63	59	50	12	12	11	63.7	46	43	40	42
26.5	18	17	16	53.0	69	64	60	50	12	11	10	64.8	46	43	40	42
27.0	17	16	15	53.9	69	64	60	50	12	11	10	65.8	46	43	40	42
27.5	17	16	15	54.8	69	64	60	50	11	10	10	66.9	46	43	40	43
28.0	16	15	14	55.7	69	65	60	50	11	10	9	68.0	47	43	40	43
28.5	16	15	14	56.5	70	65	61	50	11	10	9	69.1	47	43	41	43
29.0	15	14	13	57.4	70	65	61	50	10	10	9	70.1	47	44	41	43
30.0	14	13	13	59.2	71	66	61	50	10	9	8	72.3	47	44	41	43

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 72: Stocking levels for Douglas-fir in the ABGR/VASC plant association (full stocking = 274).

	UPPER MANAGEMENT ZONE (SDI = 206)								LOWER MANAGEMENT ZONE (SDI = 137)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	6670	6280	5807	2.7	36	34	32	56	4447	4186	3871	3.4	24	23	21	50
1.2	5065	4768	4409	3.2	40	37	35	58	3376	3179	2940	3.9	27	25	23	52
1.4	4013	3778	3494	3.5	43	40	37	59	2675	2519	2329	4.3	29	27	25	53
1.6	3280	3088	2856	3.9	46	43	40	60	2187	2059	1904	4.8	31	29	27	54
1.8	2746	2585	2390	4.3	49	46	42	61	1830	1723	1594	5.2	32	30	28	55
2.0	2342	2205	2039	4.6	51	48	44	62	1561	1470	1359	5.7	34	32	30	55
2.2	2028	1909	1766	5.0	54	50	47	63	1352	1273	1177	6.1	36	34	31	56
2.4	1778	1674	1548	5.3	56	53	49	63	1185	1116	1032	6.5	37	35	32	57
2.6	1576	1484	1372	5.6	58	55	51	64	1051	989	915	6.9	39	36	34	57
2.8	1409	1327	1227	6.0	60	57	52	64	939	884	818	7.3	40	38	35	58
3.0	1270	1195	1105	6.3	62	59	54	65	846	797	737	7.7	42	39	36	59
3.2	1152	1084	1003	6.6	64	61	56	66	768	723	668	8.1	43	40	37	59
3.4	1051	989	915	6.9	66	62	58	66	701	660	610	8.5	44	42	38	60
3.6	964	908	839	7.2	68	64	59	66	643	605	560	8.8	45	43	40	60
3.8	888	836	773	7.5	70	66	61	67	592	558	516	9.2	47	44	41	60
4.0	822	774	716	7.8	72	68	62	67	548	516	477	9.6	48	45	42	61
4.2	764	719	665	8.1	73	69	64	68	509	479	443	9.9	49	46	43	61
4.4	712	670	620	8.4	75	71	65	68	475	447	413	10.3	50	47	44	62
4.6	666	627	580	8.7	77	72	67	68	444	418	386	10.6	51	48	45	62
4.8	624	588	544	9.0	78	74	68	69	416	392	362	11.0	52	49	46	62
5.0	587	553	511	9.3	80	75	70	69	391	368	341	11.3	53	50	46	63
5.2	553	521	482	9.5	82	77	71	69	369	347	321	11.7	54	51	47	63
5.4	523	492	455	9.8	83	78	72	70	348	328	303	12.0	55	52	48	63
5.6	495	466	431	10.1	85	80	74	70	330	311	287	12.3	56	53	49	63
5.8	469	442	408	10.4	86	81	75	70	313	294	272	12.7	57	54	50	64
6.0	446	420	388	10.6	88	82	76	70	297	280	259	13.0	58	55	51	64
6.2	424	399	369	10.9	89	84	77	71	283	266	246	13.3	59	56	52	64
6.4	404	381	352	11.2	90	85	79	71	270	254	235	13.7	60	57	52	64
6.6	386	363	336	11.4	92	86	80	71	257	242	224	14.0	61	58	53	65
6.8	369	347	321	11.7	93	88	81	71	246	232	214	14.3	62	58	54	65
7.0	353	333	307	11.9	94	89	82	72	235	222	205	14.6	63	59	55	65
7.2	338	319	295	12.2	96	90	83	72	226	212	196	14.9	64	60	56	65
7.4	325	306	283	12.4	97	91	84	72	217	204	188	15.2	65	61	56	66
7.6	312	294	272	12.7	98	93	86	72	208	196	181	15.6	66	62	57	66
7.8	300	282	261	12.9	100	94	87	73	200	188	174	15.9	66	62	58	66
8.0	289	272	251	13.2	101	95	88	73	192	181	168	16.2	67	63	58	66
8.2	278	262	242	13.4	102	96	89	73	185	175	161	16.5	68	64	59	66
8.4	268	253	233	13.7	103	97	90	73	179	168	156	16.8	69	65	60	67
8.6	259	244	225	13.9	104	98	91	73	173	162	150	17.1	70	66	61	67
8.8	250	235	218	14.2	106	99	92	73	167	157	145	17.4	70	66	61	67
9.0	242	228	210	14.4	107	101	93	74	161	152	140	17.7	71	67	62	67
9.2	234	220	204	14.7	108	102	94	74	156	147	136	18.0	72	68	63	67
9.4	226	213	197	14.9	109	103	95	74	151	142	131	18.3	73	68	63	67
9.6	219	206	191	15.1	110	104	96	74	146	138	127	18.6	73	69	64	68
9.8	213	200	185	15.4	111	105	97	74	142	133	123	18.8	74	70	65	68
10.0	206	194	179	15.6	112	106	98	74	137	129	120	19.1	75	71	65	68
10.5	191	180	167	16.2	115	108	100	75	128	120	111	19.9	77	72	67	68
11.0	178	168	155	16.8	118	111	103	75	119	112	104	20.6	79	74	68	69

Table 72: Stocking levels for Douglas-fir in the ABGR/VASC plant association (full stocking = 274).

	UPPER MANAGEMENT ZONE (SDI = 206)								LOWER MANAGEMENT ZONE (SDI = 137)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	167	157	145	17.4	120	113	105	76	111	105	97	21.3	80	76	70	69
12.0	157	147	136	17.9	123	116	107	76	104	98	91	22.0	82	77	71	69
12.5	147	139	128	18.5	125	118	109	76	98	92	85	22.6	84	79	73	70
13.0	139	131	121	19.0	128	120	111	77	92	87	80	23.3	85	80	74	70
13.5	131	123	114	19.6	130	123	113	77	87	82	76	24.0	87	82	76	70
14.0	124	117	108	20.1	133	125	115	77	83	78	72	24.7	88	83	77	71
14.5	118	111	102	20.7	135	127	117	77	78	74	68	25.3	90	85	78	71
15.0	112	105	97	21.2	137	129	119	78	74	70	65	26.0	91	86	80	71
15.5	106	100	93	21.7	139	131	121	78	71	67	62	26.6	93	87	81	71
16.0	101	95	88	22.3	142	133	123	78	68	64	59	27.3	94	89	82	72
16.5	97	91	84	22.8	144	135	125	78	65	61	56	27.9	96	90	83	72
17.0	92	87	81	23.3	146	137	127	79	62	58	54	28.6	97	92	85	72
17.5	89	83	77	23.8	148	139	129	79	59	56	51	29.2	99	93	86	72
18.0	85	80	74	24.3	150	141	131	79	57	53	49	29.8	100	94	87	73
18.5	81	77	71	24.9	152	143	132	79	54	51	47	30.4	101	95	88	73
19.0	78	74	68	25.4	154	145	134	80	52	49	45	31.1	103	97	89	73
19.5	75	71	65	25.9	156	147	136	80	50	47	44	31.7	104	98	91	73
20.0	72	68	63	26.4	158	149	137	80	48	45	42	32.3	105	99	92	73
20.5	70	66	61	26.9	160	150	139	80	46	44	40	32.9	107	100	93	74
21.0	67	63	59	27.4	162	152	141	80	45	42	39	33.5	108	101	94	74
21.5	65	61	56	27.8	164	154	142	80	43	41	38	34.1	109	103	95	74
22.0	63	59	55	28.3	165	156	144	81	42	39	36	34.7	110	104	96	74
22.5	61	57	53	28.8	167	157	146	81	40	38	35	35.3	112	105	97	74
23.0	59	55	51	29.3	169	159	147	81	39	37	34	35.9	113	106	98	75
23.5	57	53	49	29.8	171	161	149	81	38	36	33	36.5	114	107	99	75
24.0	55	52	48	30.3	173	163	150	81	37	34	32	37.1	115	108	100	75
24.5	53	50	46	30.7	174	164	152	82	36	33	31	37.6	116	109	101	75
25.0	52	49	45	31.2	176	166	153	82	34	32	30	38.2	117	111	102	75
25.5	50	47	44	31.7	178	167	155	82	33	31	29	38.8	119	112	103	75
26.0	49	46	42	32.1	180	169	156	82	32	31	28	39.4	120	113	104	75
26.5	47	45	41	32.6	181	171	158	82	32	30	27	39.9	121	114	105	76
27.0	46	43	40	33.1	183	172	159	82	31	29	27	40.5	122	115	106	76
27.5	45	42	39	33.5	185	174	161	82	30	28	26	41.1	123	116	107	76
28.0	44	41	38	34.0	186	175	162	83	29	27	25	41.6	124	117	108	76
28.5	42	40	37	34.4	188	177	164	83	28	27	25	42.2	125	118	109	76
29.0	41	39	36	34.9	189	178	165	83	28	26	24	42.7	126	119	110	76
30.0	39	37	34	35.8	193	181	168	83	26	25	23	43.9	128	121	112	77

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 73: Stocking levels for western larch in the ABGR/VASC plant association (full stocking = 304).

	UPPER MANAGEMENT ZONE (SDI = 228)								LOWER MANAGEMENT ZONE (SDI = 152)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	12249	11533	10664	2.0	67	63	58	56	8166	7689	7110	2.5	45	42	39	49
1.2	8936	8413	7780	2.4	70	66	61	57	5957	5609	5186	2.9	47	44	41	50
1.4	6844	6444	5958	2.7	73	69	64	58	4563	4296	3972	3.3	49	46	42	51
1.6	5432	5115	4729	3.0	76	71	66	59	3622	3410	3153	3.7	51	48	44	51
1.8	4431	4172	3858	3.4	78	74	68	59	2954	2781	2572	4.1	52	49	45	52
2.0	3693	3477	3215	3.7	81	76	70	60	2462	2318	2143	4.5	54	51	47	52
2.2	3131	2948	2726	4.0	83	78	72	60	2088	1965	1817	4.9	55	52	48	53
2.4	2694	2536	2345	4.3	85	80	74	60	1796	1691	1563	5.3	56	53	49	53
2.6	2345	2208	2042	4.6	86	81	75	61	1564	1472	1361	5.7	58	54	50	54
2.8	2063	1942	1796	4.9	88	83	77	61	1375	1295	1197	6.0	59	55	51	54
3.0	1831	1724	1594	5.2	90	85	78	62	1221	1149	1063	6.4	60	56	52	54
3.2	1638	1542	1426	5.5	91	86	80	62	1092	1028	950	6.8	61	57	53	55
3.4	1475	1388	1284	5.8	93	88	81	62	983	926	856	7.2	62	58	54	55
3.6	1336	1258	1163	6.1	94	89	82	62	890	838	775	7.5	63	59	55	55
3.8	1216	1145	1059	6.4	96	90	83	63	811	764	706	7.9	64	60	56	55
4.0	1113	1048	969	6.7	97	91	85	63	742	699	646	8.2	65	61	56	56
4.2	1023	963	891	7.0	98	93	86	63	682	642	594	8.6	66	62	57	56
4.4	944	889	822	7.3	100	94	87	63	629	592	548	8.9	66	63	58	56
4.6	874	823	761	7.6	101	95	88	64	583	549	507	9.3	67	63	59	56
4.8	812	765	707	7.9	102	96	89	64	541	510	471	9.6	68	64	59	57
5.0	757	712	659	8.2	103	97	90	64	504	475	439	10.0	69	65	60	57
5.2	707	666	616	8.4	104	98	91	64	471	444	410	10.3	70	65	61	57
5.4	662	624	577	8.7	105	99	92	64	442	416	384	10.7	70	66	61	57
5.6	622	586	541	9.0	106	100	93	65	415	390	361	11.0	71	67	62	57
5.8	585	551	510	9.3	107	101	93	65	390	367	340	11.4	72	67	62	57
6.0	552	520	481	9.5	108	102	94	65	368	346	320	11.7	72	68	63	58
6.2	522	491	454	9.8	109	103	95	65	348	327	303	12.0	73	69	63	58
6.4	494	465	430	10.1	110	104	96	65	329	310	287	12.4	74	69	64	58
6.6	468	441	407	10.4	111	105	97	65	312	294	272	12.7	74	70	65	58
6.8	445	419	387	10.6	112	106	98	66	296	279	258	13.0	75	70	65	58
7.0	423	398	368	10.9	113	106	98	66	282	265	245	13.4	75	71	66	58
7.2	403	379	351	11.2	114	107	99	66	268	253	234	13.7	76	71	66	59
7.4	384	362	334	11.4	115	108	100	66	256	241	223	14.0	76	72	67	59
7.6	367	345	319	11.7	116	109	101	66	244	230	213	14.3	77	73	67	59
7.8	351	330	305	12.0	116	110	101	66	234	220	203	14.7	78	73	68	59
8.0	336	316	292	12.2	117	110	102	66	224	211	195	15.0	78	74	68	59
8.2	322	303	280	12.5	118	111	103	66	214	202	187	15.3	79	74	68	59
8.4	308	290	268	12.8	119	112	103	67	206	194	179	15.6	79	74	69	59
8.6	296	279	258	13.0	119	112	104	67	197	186	172	16.0	80	75	69	59
8.8	285	268	248	13.3	120	113	105	67	190	179	165	16.3	80	75	70	60
9.0	274	258	238	13.6	121	114	105	67	182	172	159	16.6	81	76	70	60
9.2	263	248	229	13.8	122	115	106	67	176	165	153	16.9	81	76	71	60
9.4	254	239	221	14.1	122	115	107	67	169	159	147	17.2	82	77	71	60
9.6	245	230	213	14.3	123	116	107	67	163	154	142	17.6	82	77	71	60
9.8	236	222	206	14.6	124	116	108	67	157	148	137	17.9	82	78	72	60
10.0	228	215	199	14.8	124	117	108	67	152	143	132	18.2	83	78	72	60
10.5	210	197	183	15.5	126	119	110	68	140	132	122	19.0	84	79	73	60

Table 73: Stocking levels for western larch in the ABGR/VASC plant association (full stocking = 304).

	UPPER MANAGEMENT ZONE (SDI = 228)								LOWER MANAGEMENT ZONE (SDI = 152)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	193	182	168	16.1	128	120	111	68	129	121	112	19.8	85	80	74	61
11.5	179	169	156	16.8	129	122	112	68	119	112	104	20.5	86	81	75	61
12.0	166	157	145	17.4	131	123	114	68	111	104	97	21.3	87	82	76	61
12.5	155	146	135	18.0	132	124	115	69	103	97	90	22.1	88	83	77	61
13.0	145	136	126	18.6	134	126	116	69	97	91	84	22.8	89	84	78	61
13.5	136	128	118	19.3	135	127	117	69	90	85	79	23.6	90	85	78	62
14.0	127	120	111	19.9	136	128	119	69	85	80	74	24.3	91	86	79	62
14.5	120	113	104	20.5	138	129	120	69	80	75	70	25.1	92	86	80	62
15.0	113	106	98	21.1	139	131	121	69	75	71	66	25.8	93	87	81	62
15.5	107	101	93	21.7	140	132	122	70	71	67	62	26.6	93	88	81	62
16.0	101	95	88	22.3	141	133	123	70	67	63	59	27.3	94	89	82	62
16.5	96	90	84	22.9	142	134	124	70	64	60	56	28.0	95	89	83	63
17.0	91	86	79	23.5	144	135	125	70	61	57	53	28.8	96	90	83	63
17.5	87	82	75	24.1	145	136	126	70	58	54	50	29.5	96	91	84	63
18.0	83	78	72	24.7	146	137	127	70	55	52	48	30.2	97	92	85	63
18.5	79	74	69	25.3	147	138	128	70	52	49	46	31.0	98	92	85	63
19.0	75	71	65	25.9	148	139	129	71	50	47	44	31.7	99	93	86	63
19.5	72	68	63	26.5	149	140	130	71	48	45	42	32.4	99	94	86	63
20.0	69	65	60	27.0	150	141	131	71	46	43	40	33.1	100	94	87	63
20.5	66	62	57	27.6	151	142	131	71	44	41	38	33.8	101	95	88	64
21.0	63	59	55	28.2	152	143	132	71	42	40	37	34.6	101	95	88	64
21.5	61	57	53	28.8	153	144	133	71	40	38	35	35.3	102	96	89	64
22.0	58	55	51	29.4	154	145	134	71	39	37	34	36.0	103	97	89	64
22.5	56	53	49	29.9	155	146	135	71	37	35	33	36.7	103	97	90	64
23.0	54	51	47	30.5	156	147	136	71	36	34	31	37.4	104	98	90	64
23.5	52	49	45	31.1	157	148	136	72	35	33	30	38.1	104	98	91	64
24.0	50	47	44	31.7	158	148	137	72	33	31	29	38.8	105	99	91	64
24.5	48	46	42	32.2	158	149	138	72	32	30	28	39.5	106	99	92	64
25.0	47	44	41	32.8	159	150	139	72	31	29	27	40.2	106	100	92	65
25.5	45	43	39	33.4	160	151	139	72	30	28	26	40.9	107	101	93	65
26.0	44	41	38	33.9	161	152	140	72	29	27	25	41.6	107	101	93	65
26.5	42	40	37	34.5	162	152	141	72	28	27	25	42.3	108	102	94	65
27.0	41	39	36	35.1	163	153	142	72	27	26	24	42.9	108	102	94	65
27.5	40	37	35	35.6	163	154	142	72	26	25	23	43.6	109	103	95	65
28.0	38	36	33	36.2	164	155	143	72	26	24	22	44.3	110	103	95	65
28.5	37	35	32	36.7	165	155	144	73	25	23	22	45.0	110	104	96	65
29.0	36	34	31	37.3	166	156	144	73	24	23	21	45.7	111	104	96	65
30.0	34	32	30	38.4	167	158	146	73	23	21	20	47.0	112	105	97	65

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 74: Stocking levels for lodgepole pine in the ABGR/VASC plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59

Table 74: Stocking levels for lodgepole pine in the ABGR/VASC plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 75: Stocking levels for grand fir in the ABGR/VASC plant association (full stocking = 368).

	UPPER MANAGEMENT ZONE (SDI = 276)								LOWER MANAGEMENT ZONE (SDI = 184)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14800	13934	12885	1.8	81	76	70	73	9867	9290	8590	2.3	54	51	47	66
1.2	10797	10165	9399	2.2	85	80	74	74	7198	6777	6266	2.6	57	53	49	67
1.4	8269	7786	7199	2.5	88	83	77	75	5513	5190	4799	3.0	59	55	51	67
1.6	6564	6180	5714	2.8	92	86	80	75	4376	4120	3810	3.4	61	58	53	68
1.8	5354	5040	4661	3.1	95	89	82	76	3569	3360	3107	3.8	63	59	55	69
2.0	4462	4201	3884	3.4	97	92	85	76	2974	2800	2589	4.1	65	61	56	69
2.2	3783	3562	3294	3.6	100	94	87	77	2522	2375	2196	4.5	67	63	58	69
2.4	3255	3064	2833	3.9	102	96	89	77	2170	2043	1889	4.8	68	64	59	70
2.6	2834	2668	2467	4.2	104	98	91	78	1889	1779	1645	5.2	70	66	61	70
2.8	2493	2347	2170	4.5	107	100	93	78	1662	1565	1447	5.5	71	67	62	71
3.0	2212	2083	1926	4.8	109	102	95	78	1475	1389	1284	5.8	72	68	63	71
3.2	1979	1863	1723	5.0	111	104	96	79	1319	1242	1148	6.2	74	69	64	71
3.4	1782	1677	1551	5.3	112	106	98	79	1188	1118	1034	6.5	75	71	65	72
3.6	1614	1519	1405	5.6	114	107	99	79	1076	1013	937	6.8	76	72	66	72
3.8	1470	1384	1280	5.9	116	109	101	79	980	923	853	7.2	77	73	67	72
4.0	1345	1266	1171	6.1	117	111	102	80	897	844	781	7.5	78	74	68	72
4.2	1236	1164	1076	6.4	119	112	104	80	824	776	717	7.8	79	75	69	73
4.4	1141	1074	993	6.6	120	113	105	80	760	716	662	8.1	80	76	70	73
4.6	1056	994	919	6.9	122	115	106	80	704	663	613	8.5	81	77	71	73
4.8	981	924	854	7.2	123	116	107	80	654	616	569	8.8	82	77	72	73
5.0	914	861	796	7.4	125	117	109	81	609	574	531	9.1	83	78	72	73
5.2	854	804	744	7.7	126	119	110	81	569	536	496	9.4	84	79	73	74
5.4	800	753	697	7.9	127	120	111	81	534	502	464	9.7	85	80	74	74
5.6	751	707	654	8.2	129	121	112	81	501	472	436	10.0	86	81	75	74
5.8	707	666	616	8.4	130	122	113	81	471	444	410	10.3	87	81	75	74
6.0	667	628	581	8.7	131	123	114	82	445	419	387	10.6	87	82	76	74
6.2	630	593	549	8.9	132	124	115	82	420	396	366	10.9	88	83	77	74
6.4	596	562	519	9.2	133	125	116	82	398	374	346	11.2	89	84	77	75
6.6	566	532	492	9.4	134	127	117	82	377	355	328	11.6	90	84	78	75
6.8	537	506	468	9.7	135	128	118	82	358	337	312	11.9	90	85	79	75
7.0	511	481	445	9.9	137	129	119	82	341	321	296	12.2	91	86	79	75
7.2	487	458	424	10.2	138	130	120	82	324	305	282	12.5	92	86	80	75
7.4	464	437	404	10.4	139	130	121	83	309	291	269	12.8	92	87	80	75
7.6	443	417	386	10.7	140	131	122	83	295	278	257	13.0	93	88	81	75
7.8	424	399	369	10.9	141	132	122	83	282	266	246	13.3	94	88	82	76
8.0	405	382	353	11.1	142	133	123	83	270	254	235	13.6	94	89	82	76
8.2	388	366	338	11.4	142	134	124	83	259	244	225	13.9	95	89	83	76
8.4	373	351	324	11.6	143	135	125	83	248	234	216	14.2	96	90	83	76
8.6	358	337	311	11.9	144	136	126	83	239	225	208	14.5	96	91	84	76
8.8	344	324	299	12.1	145	137	126	83	229	216	200	14.8	97	91	84	76
9.0	331	311	288	12.3	146	138	127	84	220	208	192	15.1	97	92	85	76
9.2	318	300	277	12.6	147	138	128	84	212	200	185	15.4	98	92	85	76
9.4	307	289	267	12.8	148	139	129	84	204	193	178	15.7	99	93	86	76
9.6	296	278	257	13.0	149	140	129	84	197	186	172	16.0	99	93	86	77
9.8	285	269	248	13.3	149	141	130	84	190	179	166	16.3	100	94	87	77
10.0	276	259	240	13.5	150	142	131	84	184	173	160	16.5	100	94	87	77
10.5	253	238	221	14.1	152	143	133	84	169	159	147	17.3	102	96	88	77
11.0	234	220	203	14.7	154	145	134	84	156	147	136	18.0	103	97	90	77

Table 75: Stocking levels for grand fir in the ABGR/VASC plant association (full stocking = 368).

	UPPER MANAGEMENT ZONE (SDI = 276)								LOWER MANAGEMENT ZONE (SDI = 184)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	216	204	188	15.2	156	147	136	85	144	136	126	18.7	104	98	91	77
12.0	201	189	175	15.8	158	149	137	85	134	126	117	19.4	105	99	92	78
12.5	187	176	163	16.4	160	150	139	85	125	118	109	20.1	106	100	93	78
13.0	175	165	152	17.0	161	152	140	85	117	110	102	20.8	108	101	94	78
13.5	164	154	143	17.5	163	153	142	85	109	103	95	21.5	109	102	95	78
14.0	154	145	134	18.1	165	155	143	86	103	97	89	22.1	110	103	96	78
14.5	145	136	126	18.6	166	156	145	86	97	91	84	22.8	111	104	96	79
15.0	137	129	119	19.2	168	158	146	86	91	86	79	23.5	112	105	97	79
15.5	129	122	112	19.7	169	159	147	86	86	81	75	24.2	113	106	98	79
16.0	122	115	106	20.3	171	161	149	86	81	77	71	24.8	114	107	99	79
16.5	116	109	101	20.8	172	162	150	86	77	73	67	25.5	115	108	100	79
17.0	110	104	96	21.4	173	163	151	87	73	69	64	26.2	116	109	101	79
17.5	105	99	91	21.9	175	165	152	87	70	66	61	26.8	117	110	101	79
18.0	100	94	87	22.5	176	166	153	87	66	63	58	27.5	117	111	102	80
18.5	95	90	83	23.0	177	167	155	87	63	60	55	28.2	118	111	103	80
19.0	91	85	79	23.5	179	168	156	87	61	57	53	28.8	119	112	104	80
19.5	87	82	76	24.1	180	169	157	87	58	54	50	29.5	120	113	104	80
20.0	83	78	72	24.6	181	171	158	87	55	52	48	30.1	121	114	105	80
20.5	80	75	69	25.1	182	172	159	88	53	50	46	30.8	122	115	106	80
21.0	76	72	66	25.7	184	173	160	88	51	48	44	31.4	122	115	107	80
21.5	73	69	64	26.2	185	174	161	88	49	46	43	32.1	123	116	107	80
22.0	70	66	61	26.7	186	175	162	88	47	44	41	32.7	124	117	108	81
22.5	68	64	59	27.2	187	176	163	88	45	43	39	33.4	125	117	109	81
23.0	65	61	57	27.8	188	177	164	88	43	41	38	34.0	125	118	109	81
23.5	63	59	55	28.3	189	178	165	88	42	39	36	34.6	126	119	110	81
24.0	61	57	53	28.8	190	179	166	88	40	38	35	35.3	127	120	111	81
24.5	58	55	51	29.3	191	180	167	88	39	37	34	35.9	128	120	111	81
25.0	56	53	49	29.8	193	181	168	88	38	35	33	36.6	128	121	112	81
25.5	55	51	48	30.4	194	182	168	89	36	34	32	37.2	129	121	112	81
26.0	53	50	46	30.9	195	183	169	89	35	33	31	37.8	130	122	113	81
26.5	51	48	44	31.4	196	184	170	89	34	32	30	38.4	130	123	114	81
27.0	49	47	43	31.9	197	185	171	89	33	31	29	39.1	131	123	114	82
27.5	48	45	42	32.4	198	186	172	89	32	30	28	39.7	132	124	115	82
28.0	46	44	40	32.9	198	187	173	89	31	29	27	40.3	132	125	115	82
28.5	45	42	39	33.4	199	188	174	89	30	28	26	40.9	133	125	116	82
29.0	44	41	38	33.9	200	189	174	89	29	27	25	41.6	134	126	116	82
30.0	41	39	36	34.9	202	190	176	89	27	26	24	42.8	135	127	117	82

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 76: Stocking levels for ponderosa pine in the ABGR/SPBE plant association (full stocking = 255).

	UPPER MANAGEMENT ZONE (SDI = 147)								LOWER MANAGEMENT ZONE (SDI = 98)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	8609	8006	7495	2.4	47	44	41	43	5768	5364	5022	3.0	31	29	27	35
1.2	6234	5798	5428	2.8	49	46	43	44	4177	3885	3637	3.5	33	31	29	36
1.4	4746	4413	4132	3.3	51	47	44	44	3180	2957	2768	4.0	34	32	30	37
1.6	3747	3484	3262	3.7	52	49	46	45	2510	2335	2185	4.5	35	33	31	37
1.8	3042	2829	2648	4.1	54	50	47	45	2038	1895	1774	5.0	36	33	31	38
2.0	2524	2347	2198	4.5	55	51	48	46	1691	1573	1472	5.5	37	34	32	38
2.2	2132	1983	1856	4.9	56	52	49	46	1429	1329	1244	5.9	38	35	33	39
2.4	1828	1700	1591	5.2	57	53	50	46	1225	1139	1066	6.4	38	36	33	39
2.6	1587	1475	1381	5.6	58	54	51	47	1063	989	925	6.9	39	36	34	39
2.8	1391	1294	1211	6.0	60	55	52	47	932	867	812	7.3	40	37	35	40
3.0	1232	1145	1072	6.4	60	56	53	47	825	767	718	7.8	41	38	35	40
3.2	1099	1022	956	6.8	61	57	53	48	736	685	641	8.3	41	38	36	40
3.4	987	918	859	7.1	62	58	54	48	661	615	576	8.7	42	39	36	41
3.6	892	829	776	7.5	63	59	55	48	598	556	520	9.2	42	39	37	41
3.8	810	754	706	7.9	64	59	56	48	543	505	473	9.6	43	40	37	41
4.0	740	688	644	8.2	65	60	56	49	496	461	432	10.1	43	40	38	41
4.2	679	631	591	8.6	65	61	57	49	455	423	396	10.5	44	41	38	41
4.4	625	581	544	9.0	66	61	57	49	419	390	365	11.0	44	41	39	42
4.6	578	537	503	9.3	67	62	58	49	387	360	337	11.4	45	42	39	42
4.8	536	498	467	9.7	67	63	59	49	359	334	313	11.8	45	42	39	42
5.0	499	464	434	10.0	68	63	59	50	334	311	291	12.3	46	42	40	42
5.2	465	433	405	10.4	69	64	60	50	312	290	271	12.7	46	43	40	42
5.4	435	405	379	10.8	69	64	60	50	292	271	254	13.1	46	43	40	43
5.6	408	379	355	11.1	70	65	61	50	273	254	238	13.6	47	43	41	43
5.8	383	357	334	11.5	70	65	61	50	257	239	224	14.0	47	44	41	43
6.0	361	336	314	11.8	71	66	62	50	242	225	211	14.4	48	44	41	43
6.2	341	317	297	12.2	71	66	62	51	228	212	199	14.8	48	45	42	43
6.4	322	300	280	12.5	72	67	63	51	216	201	188	15.3	48	45	42	43
6.6	305	284	266	12.8	72	67	63	51	204	190	178	15.7	49	45	42	43
6.8	289	269	252	13.2	73	68	64	51	194	180	169	16.1	49	45	43	44
7.0	275	256	239	13.5	73	68	64	51	184	171	160	16.5	49	46	43	44
7.2	261	243	228	13.9	74	69	64	51	175	163	153	16.9	50	46	43	44
7.4	249	232	217	14.2	74	69	65	51	167	155	145	17.4	50	46	43	44
7.6	238	221	207	14.5	75	70	65	51	159	148	139	17.8	50	47	44	44
7.8	227	211	198	14.9	75	70	66	51	152	141	132	18.2	50	47	44	44
8.0	217	202	189	15.2	76	70	66	52	145	135	127	18.6	51	47	44	44
8.2	208	193	181	15.6	76	71	66	52	139	129	121	19.0	51	47	44	44
8.4	199	185	173	15.9	77	71	67	52	133	124	116	19.4	51	48	45	44
8.6	191	178	166	16.2	77	72	67	52	128	119	111	19.8	52	48	45	45
8.8	183	170	160	16.6	77	72	67	52	123	114	107	20.2	52	48	45	45
9.0	176	164	153	16.9	78	72	68	52	118	110	103	20.6	52	48	45	45
9.2	169	158	148	17.2	78	73	68	52	114	106	99	21.0	52	49	46	45
9.4	163	152	142	17.6	79	73	68	52	109	102	95	21.5	53	49	46	45
9.6	157	146	137	17.9	79	73	69	52	105	98	92	21.9	53	49	46	45
9.8	152	141	132	18.2	79	74	69	52	102	94	88	22.3	53	49	46	45
10.0	146	136	127	18.5	80	74	69	53	98	91	85	22.7	53	50	47	45
10.5	134	125	117	19.4	81	75	70	53	90	84	78	23.7	54	50	47	45

Table 76: Stocking levels for ponderosa pine in the ABGR/SPBE plant association (full stocking = 255).

	UPPER MANAGEMENT ZONE (SDI = 147)								LOWER MANAGEMENT ZONE (SDI = 98)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	124	115	108	20.2	82	76	71	53	83	77	72	24.7	55	51	48	46
11.5	114	106	99	21.0	82	77	72	53	76	71	67	25.6	55	51	48	46
12.0	106	98	92	21.8	83	77	72	53	71	66	62	26.6	56	52	49	46
12.5	98	92	86	22.6	84	78	73	53	66	61	57	27.6	56	52	49	46
13.0	92	85	80	23.4	85	79	74	54	62	57	54	28.6	57	53	49	46
13.5	86	80	75	24.2	85	79	74	54	58	54	50	29.6	57	53	50	46
14.0	81	75	70	25.0	86	80	75	54	54	50	47	30.5	58	54	50	47
14.5	76	70	66	25.8	87	81	76	54	51	47	44	31.5	58	54	51	47
15.0	71	66	62	26.6	88	81	76	54	48	44	42	32.4	59	55	51	47
15.5	67	63	59	27.3	88	82	77	54	45	42	39	33.4	59	55	51	47
16.0	64	59	55	28.1	89	83	77	55	43	40	37	34.3	60	55	52	47
16.5	60	56	52	28.9	89	83	78	55	40	38	35	35.3	60	56	52	47
17.0	57	53	50	29.7	90	84	78	55	38	36	33	36.2	60	56	53	47
17.5	54	50	47	30.4	91	84	79	55	36	34	32	37.2	61	57	53	48
18.0	52	48	45	31.2	91	85	79	55	35	32	30	38.1	61	57	53	48
18.5	49	46	43	32.0	92	85	80	55	33	31	29	39.1	62	57	54	48
19.0	47	44	41	32.7	92	86	80	55	31	29	27	40.0	62	58	54	48
19.5	45	42	39	33.5	93	86	81	55	30	28	26	40.9	62	58	54	48
20.0	43	40	37	34.3	94	87	81	55	29	27	25	41.8	63	58	55	48
20.5	41	38	36	35.0	94	87	82	56	27	26	24	42.8	63	59	55	48
21.0	39	37	34	35.8	95	88	82	56	26	25	23	43.7	63	59	55	48
21.5	38	35	33	36.5	95	88	83	56	25	24	22	44.6	64	59	55	48
22.0	36	34	32	37.3	96	89	83	56	24	23	21	45.5	64	60	56	48
22.5	35	32	30	38.0	96	89	84	56	23	22	20	46.4	64	60	56	49
23.0	33	31	29	38.8	97	90	84	56	22	21	20	47.4	65	60	56	49
23.5	32	30	28	39.5	97	90	84	56	22	20	19	48.3	65	60	57	49
24.0	31	29	27	40.3	98	91	85	56	21	19	18	49.2	65	61	57	49
24.5	30	28	26	41.0	98	91	85	56	20	19	17	50.1	66	61	57	49
25.0	29	27	25	41.7	98	92	86	56	19	18	17	51.0	66	61	57	49
25.5	28	26	24	42.5	99	92	86	57	19	17	16	51.9	66	62	58	49
26.0	27	25	23	43.2	99	92	86	57	18	17	16	52.8	67	62	58	49
26.5	26	24	23	43.9	100	93	87	57	17	16	15	53.7	67	62	58	49
27.0	25	23	22	44.7	100	93	87	57	17	16	15	54.6	67	62	58	49
27.5	24	23	21	45.4	101	94	88	57	16	15	14	55.5	67	63	59	49
28.0	24	22	21	46.1	101	94	88	57	16	15	14	56.4	68	63	59	50
28.5	23	21	20	46.9	101	94	88	57	15	14	13	57.3	68	63	59	50
29.0	22	21	19	47.6	102	95	89	57	15	14	13	58.1	68	63	59	50
30.0	21	19	18	49.0	103	95	89	57	14	13	12	59.9	69	64	60	50

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 77: Stocking levels for Douglas-fir in the ABGR/SPBE plant association (full stocking = 198).

	UPPER MANAGEMENT ZONE (SDI = 149)								LOWER MANAGEMENT ZONE (SDI = 99)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	4820	4538	4196	3.2	26	25	23	51	3213	3025	2797	4.0	18	17	15	45
1.2	3660	3446	3186	3.7	29	27	25	53	2440	2297	2124	4.5	19	18	17	47
1.4	2900	2730	2525	4.2	31	29	27	54	1933	1820	1683	5.1	21	19	18	48
1.6	2370	2232	2064	4.6	33	31	29	55	1580	1488	1376	5.6	22	21	19	49
1.8	1984	1868	1727	5.0	35	33	31	56	1323	1245	1152	6.2	23	22	20	50
2.0	1692	1593	1473	5.5	37	35	32	57	1128	1062	982	6.7	25	23	21	50
2.2	1465	1380	1276	5.9	39	36	34	57	977	920	851	7.2	26	24	22	51
2.4	1285	1210	1119	6.3	40	38	35	58	857	807	746	7.7	27	25	23	52
2.6	1139	1072	991	6.6	42	40	37	59	759	715	661	8.1	28	26	24	52
2.8	1018	959	886	7.0	44	41	38	59	679	639	591	8.6	29	27	25	53
3.0	917	864	799	7.4	45	42	39	60	612	576	532	9.1	30	28	26	53
3.2	832	784	725	7.8	46	44	40	60	555	522	483	9.5	31	29	27	54
3.4	759	715	661	8.1	48	45	42	61	506	477	441	10.0	32	30	28	54
3.6	697	656	607	8.5	49	46	43	61	464	437	404	10.4	33	31	29	55
3.8	642	604	559	8.9	51	48	44	62	428	403	373	10.8	34	32	29	55
4.0	594	559	517	9.2	52	49	45	62	396	373	345	11.3	35	33	30	56
4.2	552	520	481	9.5	53	50	46	62	368	346	320	11.7	35	33	31	56
4.4	515	484	448	9.9	54	51	47	63	343	323	299	12.1	36	34	32	56
4.6	481	453	419	10.2	56	52	48	63	321	302	279	12.5	37	35	32	57
4.8	451	425	393	10.6	57	53	49	64	301	283	262	12.9	38	36	33	57
5.0	424	399	369	10.9	58	54	50	64	283	266	246	13.3	39	36	34	57
5.2	400	376	348	11.2	59	56	51	64	267	251	232	13.7	39	37	34	58
5.4	378	356	329	11.5	60	57	52	64	252	237	219	14.1	40	38	35	58
5.6	357	337	311	11.9	61	58	53	65	238	224	207	14.5	41	38	35	58
5.8	339	319	295	12.2	62	59	54	65	226	213	197	14.9	41	39	36	59
6.0	322	303	280	12.5	63	60	55	65	215	202	187	15.3	42	40	37	59
6.2	307	289	267	12.8	64	61	56	66	204	192	178	15.7	43	40	37	59
6.4	292	275	254	13.1	65	61	57	66	195	183	170	16.1	44	41	38	59
6.6	279	263	243	13.4	66	62	58	66	186	175	162	16.4	44	42	38	60
6.8	267	251	232	13.7	67	63	59	66	178	167	155	16.8	45	42	39	60
7.0	255	240	222	14.0	68	64	59	66	170	160	148	17.2	45	43	40	60
7.2	245	230	213	14.3	69	65	60	67	163	154	142	17.6	46	43	40	60
7.4	235	221	204	14.6	70	66	61	67	156	147	136	17.9	47	44	41	60
7.6	225	212	196	14.9	71	67	62	67	150	141	131	18.3	47	45	41	61
7.8	217	204	189	15.2	72	68	63	67	145	136	126	18.7	48	45	42	61
8.0	209	196	182	15.5	73	69	63	68	139	131	121	19.0	49	46	42	61
8.2	201	189	175	15.8	74	69	64	68	134	126	117	19.4	49	46	43	61
8.4	194	182	169	16.1	75	70	65	68	129	122	112	19.7	50	47	43	61
8.6	187	176	163	16.4	75	71	66	68	125	117	109	20.1	50	47	44	62
8.8	181	170	157	16.7	76	72	66	68	120	113	105	20.4	51	48	44	62
9.0	175	164	152	17.0	77	73	67	68	116	110	101	20.8	51	48	45	62
9.2	169	159	147	17.3	78	73	68	69	113	106	98	21.1	52	49	45	62
9.4	164	154	142	17.5	79	74	69	69	109	103	95	21.5	53	49	46	62
9.6	158	149	138	17.8	80	75	69	69	106	99	92	21.8	53	50	46	62
9.8	154	145	134	18.1	80	76	70	69	102	96	89	22.2	54	50	47	63
10.0	149	140	130	18.4	81	76	71	69	99	93	86	22.5	54	51	47	63
10.5	138	130	120	19.1	83	78	72	70	92	87	80	23.4	55	52	48	63
11.0	129	121	112	19.7	85	80	74	70	86	81	75	24.2	57	53	49	64

Table 77: Stocking levels for Douglas-fir in the ABGR/SPBE plant association (full stocking = 198).

	UPPER MANAGEMENT ZONE (SDI = 149)								LOWER MANAGEMENT ZONE (SDI = 99)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	121	114	105	20.4	87	82	76	70	80	76	70	25.0	58	55	50	64
12.0	113	106	98	21.1	89	84	77	71	75	71	66	25.8	59	56	52	64
12.5	106	100	93	21.7	91	85	79	71	71	67	62	26.6	60	57	53	65
13.0	100	94	87	22.4	92	87	80	71	67	63	58	27.4	62	58	54	65
13.5	95	89	82	23.0	94	89	82	72	63	59	55	28.2	63	59	55	65
14.0	90	84	78	23.7	96	90	83	72	60	56	52	29.0	64	60	56	65
14.5	85	80	74	24.3	97	92	85	72	57	53	49	29.8	65	61	57	66
15.0	81	76	70	25.0	99	93	86	72	54	51	47	30.6	66	62	58	66
15.5	77	72	67	25.6	101	95	88	73	51	48	45	31.3	67	63	58	66
16.0	73	69	64	26.2	102	96	89	73	49	46	43	32.1	68	64	59	66
16.5	70	66	61	26.8	104	98	90	73	47	44	41	32.8	69	65	60	67
17.0	67	63	58	27.4	105	99	92	73	45	42	39	33.6	70	66	61	67
17.5	64	60	56	28.0	107	101	93	74	43	40	37	34.3	71	67	62	67
18.0	61	58	53	28.6	108	102	94	74	41	38	36	35.1	72	68	63	67
18.5	59	55	51	29.2	110	103	96	74	39	37	34	35.8	73	69	64	68
19.0	57	53	49	29.8	111	105	97	74	38	35	33	36.5	74	70	65	68
19.5	54	51	47	30.4	113	106	98	75	36	34	32	37.3	75	71	65	68
20.0	52	49	46	31.0	114	107	99	75	35	33	30	38.0	76	72	66	68
20.5	50	47	44	31.6	115	109	101	75	34	32	29	38.7	77	72	67	68
21.0	49	46	42	32.2	117	110	102	75	32	30	28	39.4	78	73	68	69
21.5	47	44	41	32.8	118	111	103	75	31	29	27	40.1	79	74	69	69
22.0	45	43	39	33.3	120	113	104	75	30	28	26	40.8	80	75	69	69
22.5	44	41	38	33.9	121	114	105	76	29	27	25	41.5	81	76	70	69
23.0	42	40	37	34.5	122	115	106	76	28	27	25	42.2	81	77	71	69
23.5	41	39	36	35.0	123	116	107	76	27	26	24	42.9	82	78	72	69
24.0	40	37	35	35.6	125	117	109	76	26	25	23	43.6	83	78	72	70
24.5	38	36	34	36.1	126	119	110	76	26	24	22	44.3	84	79	73	70
25.0	37	35	33	36.7	127	120	111	76	25	23	22	45.0	85	80	74	70
25.5	36	34	32	37.3	129	121	112	77	24	23	21	45.6	86	81	75	70
26.0	35	33	31	37.8	130	122	113	77	23	22	20	46.3	86	81	75	70
26.5	34	32	30	38.4	131	123	114	77	23	21	20	47.0	87	82	76	70
27.0	33	31	29	38.9	132	124	115	77	22	21	19	47.6	88	83	77	71
27.5	32	30	28	39.4	133	126	116	77	22	20	19	48.3	89	84	77	71
28.0	31	30	27	40.0	135	127	117	77	21	20	18	49.0	90	84	78	71
28.5	31	29	27	40.5	136	128	118	77	20	19	18	49.6	90	85	79	71
29.0	30	28	26	41.1	137	129	119	78	20	19	17	50.3	91	86	79	71
30.0	28	27	25	42.1	139	131	121	78	19	18	16	51.6	93	87	81	71

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 78: Stocking levels for grand fir in the ABGR/SPBE plant association (full stocking = 354).

	UPPER MANAGEMENT ZONE (SDI = 266)								LOWER MANAGEMENT ZONE (SDI = 177)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	14237	13404	12395	1.9	78	73	68	72	9491	8936	8263	2.3	52	49	45	65
1.2	10386	9778	9042	2.2	82	77	71	73	6924	6519	6028	2.7	54	51	47	66
1.4	7955	7489	6925	2.5	85	80	74	74	5303	4993	4617	3.1	57	53	49	67
1.6	6314	5945	5497	2.8	88	83	77	74	4209	3963	3665	3.5	59	55	51	67
1.8	5150	4849	4484	3.1	91	86	79	75	3433	3232	2989	3.8	61	57	53	68
2.0	4292	4041	3736	3.4	94	88	82	76	2861	2694	2491	4.2	62	59	54	68
2.2	3639	3427	3168	3.7	96	90	84	76	2426	2284	2112	4.6	64	60	56	69
2.4	3131	2948	2726	4.0	98	93	86	76	2087	1965	1817	4.9	66	62	57	69
2.6	2726	2566	2373	4.3	101	95	88	77	1817	1711	1582	5.3	67	63	58	70
2.8	2398	2258	2088	4.6	103	97	89	77	1599	1505	1392	5.6	68	64	60	70
3.0	2128	2004	1853	4.9	104	98	91	78	1419	1336	1235	6.0	70	66	61	70
3.2	1903	1792	1657	5.1	106	100	93	78	1269	1195	1105	6.3	71	67	62	71
3.4	1714	1614	1492	5.4	108	102	94	78	1143	1076	995	6.6	72	68	63	71
3.6	1552	1462	1352	5.7	110	103	96	78	1035	974	901	7.0	73	69	64	71
3.8	1414	1331	1231	6.0	111	105	97	79	943	887	821	7.3	74	70	65	71
4.0	1294	1218	1126	6.2	113	106	98	79	863	812	751	7.6	75	71	66	72
4.2	1189	1119	1035	6.5	114	108	100	79	793	746	690	8.0	76	72	66	72
4.4	1097	1033	955	6.8	116	109	101	79	731	689	637	8.3	77	73	67	72
4.6	1016	956	884	7.0	117	110	102	80	677	638	590	8.6	78	74	68	72
4.8	944	889	822	7.3	119	112	103	80	629	592	548	8.9	79	74	69	73
5.0	879	828	766	7.6	120	113	104	80	586	552	510	9.3	80	75	70	73
5.2	822	774	715	7.8	121	114	106	80	548	516	477	9.6	81	76	70	73
5.4	770	725	670	8.1	122	115	107	80	513	483	447	9.9	82	77	71	73
5.6	723	681	629	8.3	124	116	108	81	482	454	420	10.2	82	78	72	73
5.8	680	640	592	8.6	125	118	109	81	454	427	395	10.5	83	78	72	73
6.0	642	604	559	8.9	126	119	110	81	428	403	372	10.8	84	79	73	74
6.2	606	571	528	9.1	127	120	111	81	404	380	352	11.2	85	80	74	74
6.4	574	540	500	9.4	128	121	112	81	383	360	333	11.5	85	80	74	74
6.6	544	512	474	9.6	129	122	113	81	363	341	316	11.8	86	81	75	74
6.8	517	486	450	9.9	130	123	113	81	344	324	300	12.1	87	82	76	74
7.0	491	463	428	10.1	131	124	114	82	328	308	285	12.4	88	82	76	74
7.2	468	441	407	10.4	132	125	115	82	312	294	272	12.7	88	83	77	74
7.4	446	420	389	10.6	133	126	116	82	298	280	259	13.0	89	84	77	75
7.6	426	401	371	10.9	134	126	117	82	284	268	247	13.3	90	84	78	75
7.8	407	384	355	11.1	135	127	118	82	272	256	236	13.6	90	85	78	75
8.0	390	367	340	11.4	136	128	119	82	260	245	226	13.9	91	85	79	75
8.2	374	352	325	11.6	137	129	119	82	249	235	217	14.2	91	86	80	75
8.4	358	337	312	11.8	138	130	120	82	239	225	208	14.5	92	87	80	75
8.6	344	324	300	12.1	139	131	121	83	229	216	200	14.8	93	87	81	75
8.8	331	311	288	12.3	140	132	122	83	220	208	192	15.1	93	88	81	75
9.0	318	300	277	12.6	141	132	122	83	212	200	185	15.4	94	88	82	76
9.2	306	288	267	12.8	141	133	123	83	204	192	178	15.7	94	89	82	76
9.4	295	278	257	13.1	142	134	124	83	197	185	171	16.0	95	89	83	76
9.6	285	268	248	13.3	143	135	125	83	190	179	165	16.3	95	90	83	76
9.8	275	258	239	13.5	144	135	125	83	183	172	159	16.6	96	90	83	76
10.0	265	250	231	13.8	145	136	126	83	177	166	154	16.9	96	91	84	76
10.5	244	229	212	14.4	147	138	128	84	162	153	141	17.6	98	92	85	76

Table 78: Stocking levels for grand fir in the ABGR/SPBE plant association (full stocking = 354).

	UPPER MANAGEMENT ZONE (SDI = 266)								LOWER MANAGEMENT ZONE (SDI = 177)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	225	212	196	15.0	148	140	129	84	150	141	130	18.3	99	93	86	77
11.5	208	196	181	15.5	150	141	131	84	139	131	121	19.0	100	94	87	77
12.0	193	182	168	16.1	152	143	132	84	129	121	112	19.8	101	95	88	77
12.5	180	170	157	16.7	154	145	134	84	120	113	105	20.5	102	96	89	77
13.0	168	159	147	17.3	155	146	135	85	112	106	98	21.2	103	97	90	77
13.5	158	149	137	17.9	157	148	137	85	105	99	92	21.9	105	98	91	78
14.0	148	139	129	18.4	158	149	138	85	99	93	86	22.6	106	99	92	78
14.5	139	131	121	19.0	160	151	139	85	93	87	81	23.3	107	100	93	78
15.0	131	124	114	19.6	161	152	140	85	88	83	76	24.0	108	101	94	78
15.5	124	117	108	20.1	163	153	142	85	83	78	72	24.6	109	102	94	78
16.0	118	111	102	20.7	164	155	143	86	78	74	68	25.3	109	103	95	78
16.5	111	105	97	21.2	166	156	144	86	74	70	65	26.0	110	104	96	78
17.0	106	100	92	21.8	167	157	145	86	71	66	61	26.7	111	105	97	79
17.5	101	95	88	22.4	168	158	146	86	67	63	58	27.4	112	106	98	79
18.0	96	90	83	22.9	169	160	148	86	64	60	56	28.0	113	106	98	79
18.5	91	86	80	23.5	171	161	149	86	61	57	53	28.7	114	107	99	79
19.0	87	82	76	24.0	172	162	150	86	58	55	51	29.4	115	108	100	79
19.5	83	79	73	24.5	173	163	151	87	56	52	48	30.1	115	109	101	79
20.0	80	75	70	25.1	174	164	152	87	53	50	46	30.7	116	109	101	79
20.5	77	72	67	25.6	176	165	153	87	51	48	44	31.4	117	110	102	80
21.0	73	69	64	26.2	177	166	154	87	49	46	43	32.1	118	111	103	80
21.5	71	66	61	26.7	178	167	155	87	47	44	41	32.7	119	112	103	80
22.0	68	64	59	27.2	179	168	156	87	45	43	39	33.4	119	112	104	80
22.5	65	61	57	27.8	180	169	157	87	43	41	38	34.0	120	113	104	80
23.0	63	59	55	28.3	181	170	158	87	42	39	36	34.7	121	114	105	80
23.5	60	57	53	28.8	182	171	159	87	40	38	35	35.3	121	114	106	80
24.0	58	55	51	29.4	183	172	159	88	39	37	34	36.0	122	115	106	80
24.5	56	53	49	29.9	184	173	160	88	38	35	33	36.6	123	116	107	80
25.0	54	51	47	30.4	185	174	161	88	36	34	32	37.3	123	116	107	81
25.5	52	49	46	31.0	186	175	162	88	35	33	30	37.9	124	117	108	81
26.0	51	48	44	31.5	187	176	163	88	34	32	29	38.6	125	117	109	81
26.5	49	46	43	32.0	188	177	164	88	33	31	29	39.2	125	118	109	81
27.0	48	45	41	32.5	189	178	165	88	32	30	28	39.8	126	119	110	81
27.5	46	43	40	33.0	190	179	165	88	31	29	27	40.5	127	119	110	81
28.0	45	42	39	33.6	191	180	166	88	30	28	26	41.1	127	120	111	81
28.5	43	41	38	34.1	192	181	167	88	29	27	25	41.7	128	120	111	81
29.0	42	40	37	34.6	193	181	168	88	28	26	24	42.4	129	121	112	81
30.0	40	37	35	35.6	195	183	169	89	26	25	23	43.6	130	122	113	81

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 79: Stocking levels for ponderosa pine in the ABGR/CARU plant association (full stocking = 316).

	UPPER MANAGEMENT ZONE (SDI = 154)								LOWER MANAGEMENT ZONE (SDI = 103)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	9013	8382	7847	2.4	49	46	43	44	6039	5616	5257	2.9	33	31	29	36
1.2	6527	6070	5682	2.8	51	48	45	44	4373	4067	3807	3.4	34	32	30	37
1.4	4968	4621	4325	3.2	53	49	46	45	3329	3096	2898	3.9	36	33	31	38
1.6	3923	3648	3415	3.6	55	51	48	46	2628	2444	2288	4.4	37	34	32	38
1.8	3184	2962	2772	4.0	56	52	49	46	2134	1984	1857	4.9	38	35	33	39
2.0	2643	2458	2301	4.4	58	54	50	47	1771	1647	1541	5.3	39	36	34	39
2.2	2232	2076	1944	4.7	59	55	51	47	1496	1391	1302	5.8	39	37	34	40
2.4	1914	1780	1666	5.1	60	56	52	47	1282	1192	1116	6.3	40	37	35	40
2.6	1661	1545	1446	5.5	61	57	53	48	1113	1035	969	6.7	41	38	36	40
2.8	1457	1355	1268	5.9	62	58	54	48	976	908	850	7.2	42	39	36	41
3.0	1289	1199	1122	6.2	63	59	55	48	864	803	752	7.6	42	39	37	41
3.2	1150	1070	1001	6.6	64	60	56	49	771	717	671	8.1	43	40	37	41
3.4	1033	961	899	7.0	65	61	57	49	692	644	603	8.5	44	41	38	41
3.6	934	868	813	7.3	66	61	57	49	626	582	545	9.0	44	41	38	42
3.8	848	789	739	7.7	67	62	58	49	568	529	495	9.4	45	42	39	42
4.0	775	721	675	8.1	68	63	59	49	519	483	452	9.8	45	42	39	42
4.2	711	661	619	8.4	68	64	60	50	476	443	415	10.3	46	43	40	42
4.4	655	609	570	8.8	69	64	60	50	439	408	382	10.7	46	43	40	43
4.6	605	563	527	9.1	70	65	61	50	405	377	353	11.1	47	44	41	43
4.8	561	522	489	9.5	71	66	61	50	376	350	327	11.6	47	44	41	43
5.0	522	485	454	9.8	71	66	62	50	350	325	304	12.0	48	44	42	43
5.2	487	453	424	10.2	72	67	63	51	326	303	284	12.4	48	45	42	43
5.4	456	424	397	10.5	72	67	63	51	305	284	266	12.8	49	45	42	43
5.6	427	397	372	10.9	73	68	64	51	286	266	249	13.3	49	46	43	44
5.8	401	373	349	11.2	74	68	64	51	269	250	234	13.7	49	46	43	44
6.0	378	352	329	11.5	74	69	65	51	253	236	221	14.1	50	46	43	44
6.2	357	332	311	11.9	75	70	65	51	239	222	208	14.5	50	47	44	44
6.4	337	314	294	12.2	75	70	66	51	226	210	197	14.9	50	47	44	44
6.6	319	297	278	12.6	76	71	66	52	214	199	186	15.3	51	47	44	44
6.8	303	282	264	12.9	76	71	67	52	203	189	177	15.7	51	48	45	44
7.0	288	268	251	13.2	77	72	67	52	193	179	168	16.2	52	48	45	44
7.2	274	255	238	13.6	77	72	67	52	183	171	160	16.6	52	48	45	45
7.4	261	243	227	13.9	78	72	68	52	175	163	152	17.0	52	49	45	45
7.6	249	231	217	14.2	78	73	68	52	167	155	145	17.4	53	49	46	45
7.8	238	221	207	14.5	79	73	69	52	159	148	139	17.8	53	49	46	45
8.0	227	211	198	14.9	79	74	69	52	152	142	133	18.2	53	49	46	45
8.2	217	202	189	15.2	80	74	69	53	146	136	127	18.6	53	50	47	45
8.4	208	194	181	15.5	80	75	70	53	140	130	122	19.0	54	50	47	45
8.6	200	186	174	15.9	81	75	70	53	134	125	117	19.4	54	50	47	45
8.8	192	178	167	16.2	81	75	71	53	129	120	112	19.8	54	51	47	45
9.0	184	172	161	16.5	81	76	71	53	124	115	108	20.2	55	51	48	46
9.2	177	165	154	16.8	82	76	71	53	119	111	103	20.6	55	51	48	46
9.4	171	159	149	17.2	82	77	72	53	114	106	100	21.0	55	51	48	46
9.6	165	153	143	17.5	83	77	72	53	110	103	96	21.4	55	52	48	46
9.8	159	148	138	17.8	83	77	72	53	106	99	93	21.8	56	52	48	46
10.0	153	142	133	18.1	83	78	73	53	103	95	89	22.1	56	52	49	46
10.5	140	131	122	18.9	84	79	73	54	94	87	82	23.1	57	53	49	46

Table 79: Stocking levels for ponderosa pine in the ABGR/CARU plant association (full stocking = 316).

	UPPER MANAGEMENT ZONE (SDI = 154)								LOWER MANAGEMENT ZONE (SDI = 103)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	129	120	113	19.7	85	79	74	54	87	81	75	24.1	57	53	50	46
11.5	120	111	104	20.5	86	80	75	54	80	74	70	25.1	58	54	50	47
12.0	111	103	97	21.3	87	81	76	54	74	69	65	26.0	58	54	51	47
12.5	103	96	90	22.1	88	82	77	54	69	64	60	27.0	59	55	51	47
13.0	96	89	84	22.9	89	82	77	55	64	60	56	27.9	59	55	52	47
13.5	90	84	78	23.6	89	83	78	55	60	56	52	28.9	60	56	52	47
14.0	84	78	73	24.4	90	84	79	55	57	53	49	29.8	60	56	53	47
14.5	79	74	69	25.2	91	85	79	55	53	49	46	30.8	61	57	53	48
15.0	75	69	65	26.0	92	85	80	55	50	47	44	31.7	61	57	53	48
15.5	70	66	61	26.7	92	86	80	55	47	44	41	32.6	62	58	54	48
16.0	67	62	58	27.5	93	87	81	55	45	42	39	33.6	62	58	54	48
16.5	63	59	55	28.2	94	87	82	56	42	39	37	34.5	63	58	55	48
17.0	60	56	52	29.0	94	88	82	56	40	37	35	35.4	63	59	55	48
17.5	57	53	49	29.7	95	88	83	56	38	35	33	36.3	64	59	55	48
18.0	54	50	47	30.5	96	89	83	56	36	34	32	37.3	64	60	56	48
18.5	52	48	45	31.2	96	89	84	56	35	32	30	38.2	64	60	56	49
19.0	49	46	43	32.0	97	90	84	56	33	31	29	39.1	65	60	56	49
19.5	47	44	41	32.7	97	91	85	56	31	29	27	40.0	65	61	57	49
20.0	45	42	39	33.5	98	91	85	56	30	28	26	40.9	66	61	57	49
20.5	43	40	37	34.2	98	92	86	56	29	27	25	41.8	66	61	57	49
21.0	41	38	36	35.0	99	92	86	57	28	26	24	42.7	66	62	58	49
21.5	39	37	34	35.7	100	93	87	57	26	25	23	43.6	67	62	58	49
22.0	38	35	33	36.4	100	93	87	57	25	24	22	44.5	67	62	58	49
22.5	36	34	32	37.2	101	94	88	57	24	23	21	45.4	67	63	59	49
23.0	35	33	31	37.9	101	94	88	57	23	22	20	46.3	68	63	59	50
23.5	34	31	29	38.6	102	94	88	57	23	21	20	47.2	68	63	59	50
24.0	33	30	28	39.3	102	95	89	57	22	20	19	48.1	68	64	60	50
24.5	31	29	27	40.1	103	95	89	57	21	20	18	48.9	69	64	60	50
25.0	30	28	26	40.8	103	96	90	57	20	19	18	49.8	69	64	60	50
25.5	29	27	25	41.5	104	96	90	57	20	18	17	50.7	69	65	60	50
26.0	28	26	25	42.2	104	97	91	57	19	18	16	51.6	70	65	61	50
26.5	27	25	24	42.9	104	97	91	58	18	17	16	52.5	70	65	61	50
27.0	26	25	23	43.7	105	98	91	58	18	16	15	53.3	70	65	61	50
27.5	26	24	22	44.4	105	98	92	58	17	16	15	54.2	71	66	61	50
28.0	25	23	22	45.1	106	98	92	58	17	15	14	55.1	71	66	62	50
28.5	24	22	21	45.8	106	99	92	58	16	15	14	56.0	71	66	62	50
29.0	23	22	20	46.5	107	99	93	58	16	14	14	56.8	71	66	62	51
30.0	22	20	19	47.9	107	100	94	58	15	14	13	58.6	72	67	63	51

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 80: Stocking levels for Douglas-fir in the ABGR/CARU plant association (full stocking = 357).

	UPPER MANAGEMENT ZONE (SDI = 268)								LOWER MANAGEMENT ZONE (SDI = 179)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	8690	8181	7565	2.4	47	45	41	61	5793	5454	5044	2.9	32	30	28	54
1.2	6599	6213	5745	2.8	52	49	45	62	4399	4142	3830	3.4	35	33	30	56
1.4	5228	4922	4552	3.1	56	53	49	63	3486	3282	3034	3.8	37	35	32	57
1.6	4274	4024	3721	3.4	60	56	52	64	2849	2682	2480	4.2	40	37	35	58
1.8	3577	3368	3114	3.7	63	60	55	65	2385	2245	2076	4.6	42	40	37	59
2.0	3051	2873	2656	4.1	67	63	58	66	2034	1915	1771	5.0	44	42	39	60
2.2	2642	2488	2300	4.4	70	66	61	67	1761	1658	1533	5.3	46	44	40	60
2.4	2317	2181	2017	4.7	73	69	63	67	1545	1454	1345	5.7	49	46	42	61
2.6	2053	1933	1787	4.9	76	71	66	68	1369	1289	1192	6.1	50	48	44	62
2.8	1836	1728	1598	5.2	78	74	68	69	1224	1152	1065	6.4	52	49	46	62
3.0	1654	1557	1440	5.5	81	76	71	69	1103	1038	960	6.8	54	51	47	63
3.2	1500	1413	1306	5.8	84	79	73	70	1000	942	871	7.1	56	53	49	63
3.4	1369	1289	1192	6.1	86	81	75	70	913	859	795	7.4	58	54	50	64
3.6	1256	1183	1093	6.3	89	84	77	71	837	788	729	7.8	59	56	52	64
3.8	1158	1090	1008	6.6	91	86	79	71	772	727	672	8.1	61	57	53	65
4.0	1071	1009	933	6.9	93	88	81	72	714	672	622	8.4	62	59	54	65
4.2	995	937	866	7.1	96	90	83	72	663	625	578	8.7	64	60	56	65
4.4	928	873	808	7.4	98	92	85	72	618	582	538	9.0	65	61	57	66
4.6	867	817	755	7.6	100	94	87	73	578	544	503	9.3	67	63	58	66
4.8	813	766	708	7.9	102	96	89	73	542	511	472	9.6	68	64	59	66
5.0	765	720	666	8.1	104	98	91	73	510	480	444	9.9	70	65	61	67
5.2	721	679	628	8.4	106	100	93	74	481	452	418	10.2	71	67	62	67
5.4	681	641	593	8.6	108	102	94	74	454	427	395	10.5	72	68	63	67
5.6	645	607	561	8.8	110	104	96	74	430	405	374	10.8	73	69	64	68
5.8	611	576	532	9.1	112	106	98	74	408	384	355	11.1	75	70	65	68
6.0	581	547	506	9.3	114	107	99	75	387	365	337	11.4	76	72	66	68
6.2	553	520	481	9.5	116	109	101	75	368	347	321	11.7	77	73	67	68
6.4	527	496	459	9.8	118	111	102	75	351	331	306	12.0	78	74	68	69
6.6	503	474	438	10.0	119	112	104	75	335	316	292	12.2	80	75	69	69
6.8	481	453	419	10.2	121	114	106	76	321	302	279	12.5	81	76	70	69
7.0	460	433	401	10.5	123	116	107	76	307	289	267	12.8	82	77	71	69
7.2	441	415	384	10.7	125	117	109	76	294	277	256	13.1	83	78	72	70
7.4	423	398	368	10.9	126	119	110	76	282	266	246	13.4	84	79	73	70
7.6	406	383	354	11.1	128	121	111	77	271	255	236	13.6	85	80	74	70
7.8	391	368	340	11.3	130	122	113	77	261	245	227	13.9	86	81	75	70
8.0	376	354	327	11.6	131	124	114	77	251	236	218	14.2	88	82	76	70
8.2	362	341	315	11.8	133	125	116	77	242	227	210	14.4	89	83	77	71
8.4	349	329	304	12.0	134	127	117	77	233	219	203	14.7	90	84	78	71
8.6	337	317	294	12.2	136	128	118	78	225	212	196	15.0	91	85	79	71
8.8	326	307	284	12.4	138	130	120	78	217	204	189	15.2	92	86	80	71
9.0	315	296	274	12.6	139	131	121	78	210	198	183	15.5	93	87	81	71
9.2	305	287	265	12.9	141	132	122	78	203	191	177	15.7	94	88	82	72
9.4	295	278	257	13.1	142	134	124	78	197	185	171	16.0	95	89	82	72
9.6	286	269	249	13.3	144	135	125	78	190	179	166	16.3	96	90	83	72
9.8	277	261	241	13.5	145	137	126	79	185	174	161	16.5	97	91	84	72
10.0	269	253	234	13.7	146	138	128	79	179	169	156	16.8	98	92	85	72
10.5	249	235	217	14.2	150	141	131	79	166	157	145	17.4	100	94	87	73
11.0	233	219	202	14.7	153	144	134	79	155	146	135	18.0	102	96	89	73

Table 80: Stocking levels for Douglas-fir in the ABGR/CARU plant association (full stocking = 357).

	UPPER MANAGEMENT ZONE (SDI = 268)								LOWER MANAGEMENT ZONE (SDI = 179)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	217	205	189	15.2	157	148	137	80	145	136	126	18.6	105	98	91	73
12.0	204	192	178	15.7	160	151	139	80	136	128	118	19.2	107	101	93	74
12.5	192	181	167	16.2	163	154	142	80	128	120	111	19.8	109	103	95	74
13.0	181	170	157	16.7	167	157	145	81	120	113	105	20.4	111	105	97	74
13.5	171	161	149	17.2	170	160	148	81	114	107	99	21.0	113	106	98	75
14.0	162	152	141	17.6	173	163	150	81	108	101	94	21.6	115	108	100	75
14.5	153	144	133	18.1	176	165	153	82	102	96	89	22.2	117	110	102	75
15.0	146	137	127	18.6	179	168	156	82	97	91	84	22.8	119	112	104	75
15.5	139	130	121	19.1	182	171	158	82	92	87	80	23.3	121	114	105	76
16.0	132	124	115	19.5	184	174	161	82	88	83	77	23.9	123	116	107	76
16.5	126	119	110	20.0	187	176	163	83	84	79	73	24.5	125	117	109	76
17.0	121	113	105	20.4	190	179	165	83	80	76	70	25.0	127	119	110	76
17.5	115	109	100	20.9	193	181	168	83	77	72	67	25.6	128	121	112	77
18.0	111	104	96	21.3	195	184	170	83	74	69	64	26.1	130	123	113	77
18.5	106	100	92	21.8	198	186	172	84	71	67	62	26.7	132	124	115	77
19.0	102	96	89	22.2	201	189	175	84	68	64	59	27.2	134	126	116	77
19.5	98	92	85	22.7	203	191	177	84	65	61	57	27.8	135	128	118	77
20.0	94	89	82	23.1	206	194	179	84	63	59	55	28.3	137	129	119	78
20.5	91	86	79	23.5	208	196	181	84	61	57	53	28.8	139	131	121	78
21.0	88	82	76	24.0	211	198	183	85	58	55	51	29.3	140	132	122	78
21.5	85	80	74	24.4	213	201	186	85	56	53	49	29.9	142	134	124	78
22.0	82	77	71	24.8	216	203	188	85	54	51	47	30.4	144	135	125	78
22.5	79	74	69	25.2	218	205	190	85	53	50	46	30.9	145	137	126	79
23.0	76	72	66	25.7	220	207	192	85	51	48	44	31.4	147	138	128	79
23.5	74	70	64	26.1	223	210	194	85	49	46	43	32.0	148	140	129	79
24.0	72	67	62	26.5	225	212	196	86	48	45	42	32.5	150	141	131	79
24.5	69	65	60	26.9	227	214	198	86	46	44	40	33.0	151	143	132	79
25.0	67	63	59	27.3	229	216	200	86	45	42	39	33.5	153	144	133	79
25.5	65	62	57	27.7	232	218	202	86	44	41	38	34.0	154	145	134	80
26.0	63	60	55	28.2	234	220	204	86	42	40	37	34.5	156	147	136	80
26.5	62	58	54	28.6	236	222	206	86	41	39	36	35.0	157	148	137	80
27.0	60	56	52	29.0	238	224	207	87	40	38	35	35.5	159	150	138	80
27.5	58	55	51	29.4	240	226	209	87	39	37	34	36.0	160	151	140	80
28.0	57	53	49	29.8	243	228	211	87	38	36	33	36.5	162	152	141	80
28.5	55	52	48	30.2	245	230	213	87	37	35	32	37.0	163	154	142	80
29.0	54	51	47	30.6	247	232	215	87	36	34	31	37.4	165	155	143	81
30.0	51	48	45	31.4	251	236	218	87	34	32	30	38.4	167	157	146	81

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 81: Stocking levels for western larch in the ABGR/CARU plant association (full stocking = 307).

	UPPER MANAGEMENT ZONE (SDI = 230)								LOWER MANAGEMENT ZONE (SDI = 154)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	12370	11646	10769	2.0	67	64	59	56	8247	7764	7180	2.5	45	42	39	49
1.2	9024	8496	7856	2.4	71	67	62	57	6016	5664	5237	2.9	47	44	41	50
1.4	6911	6507	6017	2.7	74	70	64	58	4608	4338	4011	3.3	49	46	43	51
1.6	5486	5165	4776	3.0	77	72	67	59	3657	3443	3184	3.7	51	48	44	51
1.8	4475	4213	3896	3.4	79	74	69	59	2983	2809	2597	4.1	53	50	46	52
2.0	3729	3511	3246	3.7	81	77	71	60	2486	2341	2164	4.5	54	51	47	53
2.2	3162	2977	2753	4.0	83	79	73	60	2108	1985	1835	4.9	56	52	48	53
2.4	2720	2561	2368	4.3	85	80	74	61	1813	1707	1579	5.3	57	54	50	53
2.6	2368	2230	2062	4.6	87	82	76	61	1579	1487	1375	5.6	58	55	51	54
2.8	2083	1962	1814	4.9	89	84	78	61	1389	1308	1209	6.0	59	56	52	54
3.0	1849	1741	1610	5.2	91	85	79	62	1233	1161	1073	6.4	61	57	53	54
3.2	1654	1557	1440	5.5	92	87	80	62	1102	1038	960	6.8	62	58	54	55
3.4	1489	1402	1296	5.8	94	88	82	62	993	935	864	7.1	63	59	54	55
3.6	1349	1270	1174	6.1	95	90	83	63	899	847	783	7.5	64	60	55	55
3.8	1228	1157	1069	6.4	97	91	84	63	819	771	713	7.8	64	61	56	56
4.0	1124	1058	979	6.7	98	92	85	63	749	706	652	8.2	65	62	57	56
4.2	1033	973	899	7.0	99	94	87	63	689	648	600	8.5	66	62	58	56
4.4	953	897	830	7.3	101	95	88	64	635	598	553	8.9	67	63	58	56
4.6	883	831	768	7.5	102	96	89	64	588	554	512	9.2	68	64	59	57
4.8	820	772	714	7.8	103	97	90	64	547	515	476	9.6	69	65	60	57
5.0	764	719	665	8.1	104	98	91	64	509	480	443	9.9	69	65	60	57
5.2	714	672	622	8.4	105	99	92	64	476	448	414	10.3	70	66	61	57
5.4	669	630	582	8.7	106	100	93	65	446	420	388	10.6	71	67	62	57
5.6	628	591	547	8.9	107	101	94	65	419	394	365	11.0	72	67	62	58
5.8	591	556	515	9.2	108	102	94	65	394	371	343	11.3	72	68	63	58
6.0	557	525	485	9.5	109	103	95	65	372	350	324	11.6	73	69	64	58
6.2	527	496	459	9.8	110	104	96	65	351	331	306	12.0	74	69	64	58
6.4	499	469	434	10.0	111	105	97	65	332	313	289	12.3	74	70	65	58
6.6	473	445	412	10.3	112	106	98	66	315	297	274	12.6	75	70	65	58
6.8	449	423	391	10.6	113	107	99	66	299	282	261	13.0	75	71	66	58
7.0	427	402	372	10.9	114	107	99	66	285	268	248	13.3	76	72	66	59
7.2	407	383	354	11.1	115	108	100	66	271	255	236	13.6	77	72	67	59
7.4	388	365	338	11.4	116	109	101	66	259	243	225	13.9	77	73	67	59
7.6	370	349	322	11.7	117	110	102	66	247	232	215	14.3	78	73	68	59
7.8	354	333	308	11.9	117	111	102	66	236	222	205	14.6	78	74	68	59
8.0	339	319	295	12.2	118	111	103	67	226	213	197	14.9	79	74	69	59
8.2	325	306	283	12.4	119	112	104	67	216	204	188	15.2	79	75	69	59
8.4	311	293	271	12.7	120	113	104	67	208	195	181	15.6	80	75	70	59
8.6	299	282	260	13.0	121	114	105	67	199	188	174	15.9	80	76	70	60
8.8	287	271	250	13.2	121	114	106	67	192	180	167	16.2	81	76	70	60
9.0	276	260	241	13.5	122	115	106	67	184	173	160	16.5	81	77	71	60
9.2	266	251	232	13.7	123	116	107	67	177	167	154	16.8	82	77	71	60
9.4	256	241	223	14.0	124	116	108	67	171	161	149	17.2	82	78	72	60
9.6	247	233	215	14.3	124	117	108	67	165	155	143	17.5	83	78	72	60
9.8	239	225	208	14.5	125	118	109	67	159	150	138	17.8	83	78	73	60
10.0	230	217	201	14.8	126	118	109	68	154	145	134	18.1	84	79	73	60
10.5	212	199	184	15.4	127	120	111	68	141	133	123	18.9	85	80	74	61

Table 81: Stocking levels for western larch in the ABGR/CARU plant association (full stocking = 307).

	UPPER MANAGEMENT ZONE (SDI = 230)								LOWER MANAGEMENT ZONE (SDI = 154)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	195	184	170	16.0	129	121	112	68	130	123	113	19.7	86	81	75	61
11.5	181	170	157	16.7	130	123	114	68	121	114	105	20.4	87	82	76	61
12.0	168	158	146	17.3	132	124	115	68	112	105	98	21.2	88	83	77	61
12.5	157	147	136	17.9	133	126	116	69	104	98	91	22.0	89	84	77	61
13.0	146	138	127	18.5	135	127	117	69	98	92	85	22.7	90	85	78	62
13.5	137	129	119	19.2	136	128	119	69	91	86	80	23.5	91	86	79	62
14.0	129	121	112	19.8	138	130	120	69	86	81	75	24.2	92	86	80	62
14.5	121	114	105	20.4	139	131	121	69	81	76	70	25.0	93	87	81	62
15.0	114	108	99	21.0	140	132	122	70	76	72	66	25.7	93	88	81	62
15.5	108	102	94	21.6	141	133	123	70	72	68	63	26.4	94	89	82	62
16.0	102	96	89	22.2	143	134	124	70	68	64	59	27.2	95	90	83	63
16.5	97	91	84	22.8	144	135	125	70	65	61	56	27.9	96	90	83	63
17.0	92	87	80	23.4	145	137	126	70	61	58	53	28.6	97	91	84	63
17.5	87	82	76	24.0	146	138	127	70	58	55	51	29.4	97	92	85	63
18.0	83	78	73	24.6	147	139	128	70	56	52	48	30.1	98	92	85	63
18.5	79	75	69	25.2	148	140	129	71	53	50	46	30.8	99	93	86	63
19.0	76	71	66	25.7	149	141	130	71	51	48	44	31.5	100	94	87	63
19.5	73	68	63	26.3	150	142	131	71	48	46	42	32.2	100	94	87	64
20.0	69	65	60	26.9	151	143	132	71	46	44	40	33.0	101	95	88	64
20.5	67	63	58	27.5	153	144	133	71	44	42	39	33.7	102	96	89	64
21.0	64	60	56	28.1	153	145	134	71	43	40	37	34.4	102	96	89	64
21.5	61	58	53	28.7	154	145	134	71	41	38	36	35.1	103	97	90	64
22.0	59	55	51	29.2	155	146	135	71	39	37	34	35.8	104	98	90	64
22.5	57	53	49	29.8	156	147	136	72	38	36	33	36.5	104	98	91	64
23.0	55	51	47	30.4	157	148	137	72	36	34	32	37.2	105	99	91	64
23.5	53	49	46	30.9	158	149	138	72	35	33	30	37.9	105	99	92	64
24.0	51	48	44	31.5	159	150	139	72	34	32	29	38.6	106	100	92	65
24.5	49	46	43	32.1	160	151	139	72	33	31	28	39.3	107	100	93	65
25.0	47	44	41	32.6	161	151	140	72	31	30	27	40.0	107	101	93	65
25.5	46	43	40	33.2	162	152	141	72	30	29	26	40.7	108	102	94	65
26.0	44	42	38	33.8	163	153	142	72	29	28	26	41.4	108	102	94	65
26.5	43	40	37	34.3	163	154	142	72	28	27	25	42.0	109	103	95	65
27.0	41	39	36	34.9	164	155	143	72	28	26	24	42.7	110	103	95	65
27.5	40	38	35	35.5	165	155	144	73	27	25	23	43.4	110	104	96	65
28.0	39	37	34	36.0	166	156	144	73	26	24	23	44.1	111	104	96	65
28.5	38	35	33	36.6	167	157	145	73	25	24	22	44.8	111	105	97	65
29.0	37	34	32	37.1	167	158	146	73	24	23	21	45.5	112	105	97	65
30.0	34	32	30	38.2	169	159	147	73	23	22	20	46.8	113	106	98	66

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 82: Stocking levels for lodgepole pine in the ABGR/CARU plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
1.0	9337	8791	2.3	2.2	51	48	51	78	6256	5890	2.8	2.6	34	32	44	59
1.2	6799	6401	2.7	2.5	53	50	52	78	4555	4289	3.3	3.1	36	34	45	59
1.4	5199	4895	3.1	2.9	56	52	53	78	3484	3280	3.8	3.5	37	35	46	59
1.6	4121	3880	3.5	3.3	58	54	54	78	2761	2600	4.3	4.0	39	36	46	59
1.8	3358	3161	3.9	3.6	59	56	54	78	2250	2118	4.7	4.4	40	37	47	59
2.0	2795	2632	4.2	3.9	61	57	55	78	1873	1763	5.2	4.8	41	38	48	59
2.2	2368	2230	4.6	4.3	63	59	55	78	1587	1494	5.6	5.2	42	39	48	59
2.4	2035	1916	5.0	4.6	64	60	55	78	1364	1284	6.1	5.7	43	40	48	59
2.6	1771	1667	5.3	5.0	65	61	56	78	1186	1117	6.5	6.1	44	41	49	59
2.8	1557	1465	5.7	5.3	67	63	56	78	1043	982	6.9	6.5	45	42	49	59
3.0	1380	1300	6.0	5.6	68	64	57	78	925	871	7.4	6.9	45	43	49	59
3.2	1234	1162	6.4	5.9	69	65	57	78	827	778	7.8	7.3	46	43	50	59
3.4	1110	1045	6.7	6.3	70	66	57	78	744	700	8.2	7.7	47	44	50	59
3.6	1005	946	7.1	6.6	71	67	57	78	673	634	8.6	8.0	48	45	50	59
3.8	915	861	7.4	6.9	72	68	58	78	613	577	9.1	8.4	48	45	50	59
4.0	837	788	7.8	7.2	73	69	58	78	561	528	9.5	8.8	49	46	51	59
4.2	769	724	8.1	7.5	74	70	58	78	515	485	9.9	9.2	50	47	51	59
4.4	709	667	8.4	7.8	75	70	58	78	475	447	10.3	9.6	50	47	51	59
4.6	656	618	8.8	8.1	76	71	59	78	440	414	10.7	10.0	51	48	51	59
4.8	609	574	9.1	8.5	77	72	59	78	408	384	11.1	10.3	51	48	52	59
5.0	568	534	9.4	8.8	77	73	59	78	380	358	11.5	10.7	52	49	52	59
5.2	530	499	9.7	9.1	78	74	59	78	355	334	11.9	11.1	52	49	52	59
5.4	496	467	10.1	9.4	79	74	59	78	333	313	12.3	11.4	53	50	52	59
5.6	466	439	10.4	9.7	80	75	59	78	312	294	12.7	11.8	53	50	52	59
5.8	438	413	10.7	10.0	80	76	60	78	294	277	13.1	12.2	54	51	52	59
6.0	413	389	11.0	10.3	81	76	60	78	277	261	13.5	12.5	54	51	53	59
6.2	390	368	11.4	10.6	82	77	60	78	262	246	13.9	12.9	55	52	53	59
6.4	369	348	11.7	10.9	83	78	60	78	247	233	14.3	13.3	55	52	53	59
6.6	350	330	12.0	11.2	83	78	60	78	235	221	14.6	13.6	56	52	53	59
6.8	332	313	12.3	11.4	84	79	60	78	223	210	15.0	14.0	56	53	53	59
7.0	316	298	12.6	11.7	84	80	60	78	212	199	15.4	14.3	57	53	53	59
7.2	301	283	12.9	12.0	85	80	61	78	202	190	15.8	14.7	57	54	53	59
7.4	287	270	13.2	12.3	86	81	61	78	192	181	16.2	15.1	57	54	54	59
7.6	274	258	13.6	12.6	86	81	61	78	184	173	16.6	15.4	58	54	54	59
7.8	262	246	13.9	12.9	87	82	61	78	175	165	16.9	15.8	58	55	54	59
8.0	251	236	14.2	13.2	87	82	61	78	168	158	17.3	16.1	59	55	54	59
8.2	240	226	14.5	13.5	88	83	61	78	161	151	17.7	16.5	59	56	54	59
8.4	230	217	14.8	13.8	89	83	61	78	154	145	18.1	16.8	59	56	54	59
8.6	221	208	15.1	14.0	89	84	61	78	148	139	18.4	17.2	60	56	54	59
8.8	212	200	15.4	14.3	90	84	62	78	142	134	18.8	17.5	60	57	54	59
9.0	204	192	15.7	14.6	90	85	62	78	137	129	19.2	17.8	60	57	54	59
9.2	196	185	16.0	14.9	91	85	62	78	132	124	19.5	18.2	61	57	55	59
9.4	189	178	16.3	15.2	91	86	62	78	127	119	19.9	18.5	61	58	55	59
9.6	182	172	16.6	15.5	92	86	62	78	122	115	20.3	18.9	61	58	55	59
9.8	176	166	16.9	15.7	92	87	62	78	118	111	20.7	19.2	62	58	55	59
10.0	170	160	17.2	16.0	93	87	62	78	114	107	21.0	19.6	62	58	55	59
10.5	156	147	18.0	16.7	94	88	62	78	105	98	21.9	20.4	63	59	55	59
11.0	144	136	18.7	17.4	95	89	63	78	96	91	22.8	21.3	64	60	55	59

Table 82: Stocking levels for lodgepole pine in the ABGR/CARU plant association (full stocking = 277).

	UPPER MANAGEMENT ZONE (SDI = 170)								LOWER MANAGEMENT ZONE (SDI = 114)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	ES	SS	EA	IS	UC	MC	EA	IS	ES	SS	EA	IS	UC	MC
11.5	133	125	19.4	18.1	96	90	63	78	89	84	23.7	22.1	64	61	56	59
12.0	124	116	20.2	18.8	97	91	63	78	83	78	24.6	22.9	65	61	56	59
12.5	115	108	20.9	19.4	98	92	63	78	77	73	25.5	23.8	66	62	56	59
13.0	108	101	21.6	20.1	99	93	63	78	72	68	26.4	24.6	66	63	56	59
13.5	101	95	22.3	20.8	100	94	64	78	68	64	27.3	25.4	67	63	56	59
14.0	95	89	23.1	21.5	101	95	64	78	63	60	28.2	26.2	68	64	57	59
14.5	89	84	23.8	22.1	102	96	64	78	60	56	29.0	27.0	68	64	57	59
15.0	84	79	24.5	22.8	103	97	64	78	56	53	29.9	27.8	69	65	57	59
15.5	79	75	25.2	23.4	104	98	64	78	53	50	30.8	28.6	70	66	57	59
16.0	75	71	25.9	24.1	105	99	64	78	50	47	31.6	29.4	70	66	57	59
16.5	71	67	26.6	24.8	106	99	64	78	48	45	32.5	30.2	71	67	57	59
17.0	67	64	27.3	25.4	106	100	65	78	45	43	33.4	31.0	71	67	57	59
17.5	64	60	28.0	26.1	107	101	65	78	43	40	34.2	31.8	72	68	58	59
18.0	61	58	28.7	26.7	108	102	65	78	41	39	35.1	32.6	72	68	58	59
18.5	58	55	29.4	27.3	109	102	65	78	39	37	35.9	33.4	73	69	58	59
19.0	56	52	30.1	28.0	110	103	65	78	37	35	36.7	34.2	73	69	58	59
19.5	53	50	30.8	28.6	110	104	65	78	36	34	37.6	35.0	74	70	58	59
20.0	51	48	31.4	29.3	111	104	65	78	34	32	38.4	35.8	74	70	58	59
20.5	49	46	32.1	29.9	112	105	65	78	33	31	39.3	36.5	75	70	58	59
21.0	47	44	32.8	30.5	112	106	66	78	31	29	40.1	37.3	75	71	58	59
21.5	45	42	33.5	31.2	113	106	66	78	30	28	40.9	38.1	76	71	59	59
22.0	43	41	34.2	31.8	114	107	66	78	29	27	41.7	38.8	76	72	59	59
22.5	41	39	34.8	32.4	114	108	66	78	28	26	42.6	39.6	77	72	59	59
23.0	40	38	35.5	33.0	115	108	66	78	27	25	43.4	40.4	77	73	59	59
23.5	38	36	36.2	33.7	116	109	66	78	26	24	44.2	41.1	78	73	59	59
24.0	37	35	36.9	34.3	116	110	66	78	25	23	45.0	41.9	78	73	59	59
24.5	36	34	37.5	34.9	117	110	66	78	24	23	45.8	42.7	78	74	59	59
25.0	34	32	38.2	35.5	118	111	66	78	23	22	46.6	43.4	79	74	59	59
25.5	33	31	38.8	36.2	118	111	66	78	22	21	47.5	44.2	79	75	59	59
26.0	32	30	39.5	36.8	119	112	67	78	22	20	48.3	44.9	80	75	59	59
26.5	31	29	40.2	37.4	119	112	67	78	21	20	49.1	45.7	80	75	59	59
27.0	30	28	40.8	38.0	120	113	67	78	20	19	49.9	46.4	80	76	60	59
27.5	29	28	41.5	38.6	121	113	67	78	20	18	50.7	47.2	81	76	60	59
28.0	28	27	42.1	39.2	121	114	67	78	19	18	51.5	47.9	81	76	60	59
28.5	27	26	42.8	39.8	122	115	67	78	18	17	52.3	48.7	82	77	60	59
29.0	27	25	43.4	40.4	122	115	67	78	18	17	53.1	49.4	82	77	60	59
30.0	25	24	44.7	41.6	123	116	67	78	17	16	54.7	50.9	83	78	60	59

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

SS Square spacing; distance between trees (feet) when spaced on a square grid pattern, rather than equilaterally.

UC Unmanaged canopy cover; based on the "CL" equation from Dealy (1985) and the basal area/acre for an even-aged structure (EA columns). Pertains to unthinned stands, or those thinned after a mean height of 9 feet.

MC Managed canopy cover; based on Cochran and Dahms (1998). Pertains to stands thinned early in life (< 9').

Table 83: Stocking levels for grand fir in the ABGR/CARU plant association (full stocking = 444).

	UPPER MANAGEMENT ZONE (SDI = 333)								LOWER MANAGEMENT ZONE (SDI = 222)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	17859	16814	15548	1.7	97	92	85	76	11906	11209	10365	2.1	65	61	57	69
1.2	13028	12266	11342	2.0	102	96	89	77	8685	8177	7561	2.4	68	64	59	70
1.4	9978	9395	8687	2.2	107	100	93	78	6652	6263	5791	2.7	71	67	62	71
1.6	7920	7457	6895	2.5	111	104	96	79	5280	4971	4597	3.1	74	69	64	71
1.8	6460	6082	5624	2.8	114	107	99	79	4307	4055	3749	3.4	76	72	66	72
2.0	5384	5069	4687	3.1	117	111	102	80	3589	3379	3125	3.7	78	74	68	72
2.2	4565	4298	3975	3.3	121	113	105	80	3043	2865	2650	4.1	80	76	70	73
2.4	3927	3698	3419	3.6	123	116	107	80	2618	2465	2279	4.4	82	77	72	73
2.6	3419	3219	2977	3.8	126	119	110	81	2280	2146	1985	4.7	84	79	73	74
2.8	3008	2832	2619	4.1	129	121	112	81	2005	1888	1746	5.0	86	81	75	74
3.0	2670	2513	2324	4.3	131	123	114	82	1780	1676	1549	5.3	87	82	76	74
3.2	2388	2248	2079	4.6	133	126	116	82	1592	1499	1386	5.6	89	84	77	75
3.4	2150	2024	1872	4.8	136	128	118	82	1433	1349	1248	5.9	90	85	79	75
3.6	1947	1833	1695	5.1	138	130	120	82	1298	1222	1130	6.2	92	86	80	75
3.8	1773	1670	1544	5.3	140	132	122	83	1182	1113	1029	6.5	93	88	81	75
4.0	1623	1528	1413	5.6	142	133	123	83	1082	1019	942	6.8	94	89	82	76
4.2	1492	1404	1299	5.8	144	135	125	83	994	936	866	7.1	96	90	83	76
4.4	1376	1296	1198	6.0	145	137	127	83	917	864	799	7.4	97	91	84	76
4.6	1274	1200	1109	6.3	147	138	128	84	850	800	740	7.7	98	92	85	76
4.8	1184	1115	1031	6.5	149	140	130	84	789	743	687	8.0	99	93	86	77
5.0	1103	1039	960	6.8	150	142	131	84	735	692	640	8.3	100	94	87	77
5.2	1031	970	897	7.0	152	143	132	84	687	647	598	8.6	101	95	88	77
5.4	966	909	841	7.2	154	145	134	84	644	606	560	8.8	102	96	89	77
5.6	907	854	789	7.4	155	146	135	85	605	569	526	9.1	103	97	90	77
5.8	853	803	743	7.7	157	147	136	85	569	536	495	9.4	104	98	91	77
6.0	805	758	701	7.9	158	149	138	85	536	505	467	9.7	105	99	92	78
6.2	760	716	662	8.1	159	150	139	85	507	477	441	10.0	106	100	93	78
6.4	720	678	627	8.4	161	151	140	85	480	452	418	10.2	107	101	93	78
6.6	682	642	594	8.6	162	153	141	85	455	428	396	10.5	108	102	94	78
6.8	648	610	564	8.8	163	154	142	86	432	407	376	10.8	109	103	95	78
7.0	616	580	537	9.0	165	155	143	86	411	387	358	11.1	110	103	96	78
7.2	587	553	511	9.3	166	156	145	86	391	368	341	11.3	111	104	96	79
7.4	560	527	487	9.5	167	157	146	86	373	351	325	11.6	111	105	97	79
7.6	535	503	465	9.7	168	159	147	86	356	336	310	11.9	112	106	98	79
7.8	511	481	445	9.9	170	160	148	86	341	321	297	12.1	113	106	98	79
8.0	489	461	426	10.1	171	161	149	86	326	307	284	12.4	114	107	99	79
8.2	469	441	408	10.4	172	162	150	86	313	294	272	12.7	115	108	100	79
8.4	450	423	391	10.6	173	163	151	87	300	282	261	13.0	115	109	100	79
8.6	432	406	376	10.8	174	164	152	87	288	271	251	13.2	116	109	101	79
8.8	415	391	361	11.0	175	165	153	87	277	260	241	13.5	117	110	102	80
9.0	399	376	347	11.2	176	166	153	87	266	250	232	13.8	118	111	102	80
9.2	384	362	334	11.4	177	167	154	87	256	241	223	14.0	118	111	103	80
9.4	370	348	322	11.7	178	168	155	87	247	232	215	14.3	119	112	104	80
9.6	357	336	311	11.9	179	169	156	87	238	224	207	14.5	120	113	104	80
9.8	344	324	300	12.1	180	170	157	87	230	216	200	14.8	120	113	105	80
10.0	333	313	290	12.3	181	171	158	87	222	209	193	15.1	121	114	105	80
10.5	306	288	266	12.8	184	173	160	88	204	192	177	15.7	123	115	107	80
11.0	282	266	246	13.4	186	175	162	88	188	177	164	16.4	124	117	108	81

Table 83: Stocking levels for grand fir in the ABGR/CARU plant association (full stocking = 444).

	UPPER MANAGEMENT ZONE (SDI = 333)								LOWER MANAGEMENT ZONE (SDI = 222)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	261	246	227	13.9	188	177	164	88	174	164	152	17.0	126	118	109	81
12.0	243	228	211	14.4	191	179	166	88	162	152	141	17.6	127	120	111	81
12.5	226	213	197	14.9	193	181	168	88	151	142	131	18.3	128	121	112	81
13.0	211	199	184	15.4	195	183	169	89	141	133	123	18.9	130	122	113	81
13.5	198	186	172	15.9	197	185	171	89	132	124	115	19.5	131	123	114	82
14.0	186	175	162	16.5	199	187	173	89	124	117	108	20.2	132	125	115	82
14.5	175	165	152	17.0	201	189	175	89	117	110	101	20.8	134	126	116	82
15.0	165	155	144	17.5	202	191	176	89	110	104	96	21.4	135	127	117	82
15.5	156	147	136	18.0	204	192	178	90	104	98	90	22.0	136	128	118	82
16.0	147	139	128	18.5	206	194	179	90	98	93	86	22.6	137	129	120	82
16.5	140	132	122	19.0	208	195	181	90	93	88	81	23.2	138	130	121	83
17.0	133	125	116	19.5	209	197	182	90	89	83	77	23.8	140	131	121	83
17.5	126	119	110	20.0	211	199	184	90	84	79	73	24.4	141	132	122	83
18.0	120	113	105	20.4	213	200	185	90	80	76	70	25.0	142	133	123	83
18.5	115	108	100	20.9	214	202	186	90	76	72	67	25.6	143	134	124	83
19.0	110	103	95	21.4	216	203	188	91	73	69	64	26.2	144	135	125	83
19.5	105	99	91	21.9	217	205	189	91	70	66	61	26.8	145	136	126	83
20.0	100	94	87	22.4	219	206	190	91	67	63	58	27.4	146	137	127	83
20.5	96	90	84	22.9	220	207	192	91	64	60	56	28.0	147	138	128	84
21.0	92	87	80	23.4	222	209	193	91	61	58	53	28.6	148	139	129	84
21.5	88	83	77	23.8	223	210	194	91	59	56	51	29.2	149	140	129	84
22.0	85	80	74	24.3	224	211	195	91	57	53	49	29.8	150	141	130	84
22.5	82	77	71	24.8	226	213	197	91	55	51	47	30.4	151	142	131	84
23.0	79	74	69	25.3	227	214	198	91	52	49	46	31.0	151	143	132	84
23.5	76	71	66	25.8	228	215	199	92	51	48	44	31.5	152	143	133	84
24.0	73	69	64	26.2	230	216	200	92	49	46	42	32.1	153	144	133	84
24.5	71	66	61	26.7	231	218	201	92	47	44	41	32.7	154	145	134	84
25.0	68	64	59	27.2	232	219	202	92	45	43	40	33.3	155	146	135	85
25.5	66	62	57	27.6	234	220	203	92	44	41	38	33.9	156	147	136	85
26.0	64	60	55	28.1	235	221	204	92	42	40	37	34.4	157	147	136	85
26.5	62	58	54	28.6	236	222	205	92	41	39	36	35.0	157	148	137	85
27.0	60	56	52	29.0	237	223	206	92	40	37	35	35.6	158	149	138	85
27.5	58	54	50	29.5	238	224	208	92	39	36	34	36.1	159	150	138	85
28.0	56	53	49	30.0	240	225	209	92	37	35	33	36.7	160	150	139	85
28.5	54	51	47	30.4	241	227	210	92	36	34	32	37.3	160	151	140	85
29.0	53	50	46	30.9	242	228	210	93	35	33	31	37.8	161	152	140	85
30.0	50	47	43	31.8	244	230	212	93	33	31	29	39.0	163	153	142	85

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 84: Stocking levels for ponderosa pine in the ABGR/CAGE plant association (full stocking = 210).

	UPPER MANAGEMENT ZONE (SDI = 109)								LOWER MANAGEMENT ZONE (SDI = 73)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	6382	5936	5556	2.8	35	32	30	37	4276	3977	3723	3.4	23	22	20	30
1.2	4622	4298	4024	3.3	36	34	32	38	3097	2880	2696	4.0	24	23	21	31
1.4	3518	3272	3063	3.8	38	35	33	39	2357	2192	2052	4.6	25	23	22	31
1.6	2778	2583	2418	4.3	39	36	34	39	1861	1731	1620	5.2	26	24	23	32
1.8	2255	2097	1963	4.7	40	37	35	40	1511	1405	1315	5.8	27	25	23	33
2.0	1871	1740	1629	5.2	41	38	36	40	1254	1166	1092	6.3	27	25	24	33
2.2	1581	1470	1376	5.6	42	39	36	41	1059	985	922	6.9	28	26	24	33
2.4	1355	1260	1180	6.1	43	40	37	41	908	844	790	7.4	29	27	25	34
2.6	1176	1094	1024	6.5	43	40	38	41	788	733	686	8.0	29	27	25	34
2.8	1032	959	898	7.0	44	41	38	42	691	643	602	8.5	30	27	26	34
3.0	913	849	795	7.4	45	42	39	42	612	569	533	9.1	30	28	26	35
3.2	814	757	709	7.9	45	42	40	42	546	507	475	9.6	30	28	27	35
3.4	732	680	637	8.3	46	43	40	42	490	456	427	10.1	31	29	27	35
3.6	661	615	576	8.7	47	43	41	43	443	412	386	10.7	31	29	27	35
3.8	601	559	523	9.1	47	44	41	43	403	374	350	11.2	32	29	28	36
4.0	549	510	478	9.6	48	45	42	43	368	342	320	11.7	32	30	28	36
4.2	503	468	438	10.0	48	45	42	43	337	314	294	12.2	32	30	28	36
4.4	464	431	404	10.4	49	46	43	44	311	289	270	12.7	33	30	29	36
4.6	428	398	373	10.8	49	46	43	44	287	267	250	13.2	33	31	29	36
4.8	397	370	346	11.3	50	46	43	44	266	248	232	13.7	33	31	29	37
5.0	370	344	322	11.7	50	47	44	44	248	230	216	14.3	34	31	29	37
5.2	345	321	300	12.1	51	47	44	44	231	215	201	14.8	34	32	30	37
5.4	323	300	281	12.5	51	48	45	44	216	201	188	15.3	34	32	30	37
5.6	302	281	263	12.9	52	48	45	45	203	188	176	15.8	35	32	30	37
5.8	284	264	247	13.3	52	49	45	45	190	177	166	16.3	35	32	30	37
6.0	268	249	233	13.7	53	49	46	45	179	167	156	16.7	35	33	31	38
6.2	253	235	220	14.1	53	49	46	45	169	157	147	17.2	35	33	31	38
6.4	239	222	208	14.5	53	50	46	45	160	149	139	17.7	36	33	31	38
6.6	226	210	197	14.9	54	50	47	45	152	141	132	18.2	36	33	31	38
6.8	215	199	187	15.3	54	50	47	45	144	134	125	18.7	36	34	32	38
7.0	204	190	177	15.7	54	51	47	46	137	127	119	19.2	36	34	32	38
7.2	194	180	169	16.1	55	51	48	46	130	121	113	19.7	37	34	32	38
7.4	185	172	161	16.5	55	51	48	46	124	115	108	20.2	37	34	32	38
7.6	176	164	153	16.9	55	52	48	46	118	110	103	20.6	37	35	32	39
7.8	168	156	146	17.3	56	52	49	46	113	105	98	21.1	37	35	33	39
8.0	161	150	140	17.7	56	52	49	46	108	100	94	21.6	38	35	33	39
8.2	154	143	134	18.1	56	53	49	46	103	96	90	22.1	38	35	33	39
8.4	148	137	128	18.5	57	53	49	46	99	92	86	22.6	38	35	33	39
8.6	142	132	123	18.9	57	53	50	46	95	88	83	23.0	38	36	33	39
8.8	136	126	118	19.2	57	53	50	46	91	85	79	23.5	38	36	33	39
9.0	131	121	114	19.6	58	54	50	47	88	81	76	24.0	39	36	34	39
9.2	126	117	109	20.0	58	54	50	47	84	78	73	24.4	39	36	34	39
9.4	121	112	105	20.4	58	54	51	47	81	75	71	24.9	39	36	34	39
9.6	117	108	101	20.8	59	54	51	47	78	73	68	25.4	39	36	34	39
9.8	112	104	98	21.2	59	55	51	47	75	70	66	25.9	39	37	34	40
10.0	108	101	94	21.5	59	55	51	47	73	68	63	26.3	40	37	34	40
10.5	99	92	87	22.5	60	56	52	47	67	62	58	27.5	40	37	35	40

Table 84: Stocking levels for ponderosa pine in the ABGR/CAGE plant association (full stocking = 210).

	UPPER MANAGEMENT ZONE (SDI = 109)								LOWER MANAGEMENT ZONE (SDI = 73)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	92	85	80	23.4	60	56	53	47	61	57	53	28.6	40	38	35	40
11.5	85	79	74	24.4	61	57	53	48	57	53	49	29.8	41	38	36	40
12.0	78	73	68	25.3	62	57	54	48	53	49	46	30.9	41	38	36	40
12.5	73	68	64	26.2	62	58	54	48	49	45	43	32.1	42	39	36	41
13.0	68	63	59	27.2	63	58	55	48	46	42	40	33.2	42	39	37	41
13.5	64	59	55	28.1	63	59	55	48	43	40	37	34.3	42	39	37	41
14.0	60	56	52	29.0	64	59	56	48	40	37	35	35.4	43	40	37	41
14.5	56	52	49	29.9	64	60	56	49	38	35	33	36.6	43	40	38	41
15.0	53	49	46	30.8	65	60	56	49	35	33	31	37.7	43	40	38	41
15.5	50	46	43	31.7	65	61	57	49	33	31	29	38.8	44	41	38	42
16.0	47	44	41	32.7	66	61	57	49	32	29	28	39.9	44	41	38	42
16.5	45	42	39	33.6	66	62	58	49	30	28	26	41.0	44	41	39	42
17.0	42	39	37	34.5	67	62	58	49	28	26	25	42.1	45	42	39	42
17.5	40	37	35	35.3	67	63	59	49	27	25	23	43.2	45	42	39	42
18.0	38	36	33	36.2	68	63	59	50	26	24	22	44.3	45	42	39	42
18.5	36	34	32	37.1	68	63	59	50	24	23	21	45.4	46	42	40	42
19.0	35	32	30	38.0	69	64	60	50	23	22	20	46.4	46	43	40	42
19.5	33	31	29	38.9	69	64	60	50	22	21	19	47.5	46	43	40	42
20.0	32	30	28	39.8	69	64	60	50	21	20	19	48.6	46	43	40	43
20.5	30	28	26	40.7	70	65	61	50	20	19	18	49.7	47	43	41	43
21.0	29	27	25	41.5	70	65	61	50	20	18	17	50.7	47	44	41	43
21.5	28	26	24	42.4	70	66	61	50	19	17	16	51.8	47	44	41	43
22.0	27	25	23	43.3	71	66	62	50	18	17	16	52.9	47	44	41	43
22.5	26	24	22	44.2	71	66	62	50	17	16	15	53.9	48	44	42	43
23.0	25	23	22	45.0	72	67	62	51	17	15	14	55.0	48	45	42	43
23.5	24	22	21	45.9	72	67	63	51	16	15	14	56.1	48	45	42	43
24.0	23	21	20	46.8	72	67	63	51	15	14	13	57.1	48	45	42	43
24.5	22	21	19	47.6	73	68	63	51	15	14	13	58.2	49	45	42	43
25.0	21	20	19	48.5	73	68	64	51	14	13	12	59.2	49	45	43	44
25.5	21	19	18	49.3	73	68	64	51	14	13	12	60.3	49	46	43	44
26.0	20	19	17	50.2	74	68	64	51	13	12	12	61.3	49	46	43	44
26.5	19	18	17	51.0	74	69	64	51	13	12	11	62.3	50	46	43	44
27.0	19	17	16	51.9	74	69	65	51	13	12	11	63.4	50	46	43	44
27.5	18	17	16	52.7	75	69	65	51	12	11	11	64.4	50	46	44	44
28.0	18	16	15	53.6	75	70	65	51	12	11	10	65.5	50	47	44	44
28.5	17	16	15	54.4	75	70	65	51	11	11	10	66.5	50	47	44	44
29.0	16	15	14	55.3	76	70	66	52	11	10	10	67.5	51	47	44	44
30.0	16	14	13	57.0	76	71	66	52	10	10	9	69.6	51	47	44	44

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 7% for an irregular stand structure (see figure 8).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CP" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 85: Stocking levels for Douglas-fir in the ABGR/CAGE plant association (full stocking = 301).

	UPPER MANAGEMENT ZONE (SDI = 226)								LOWER MANAGEMENT ZONE (SDI = 151)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	7326	6898	6378	2.6	40	38	35	58	4884	4599	4252	3.2	27	25	23	52
1.2	5563	5238	4843	3.0	44	41	38	59	3709	3492	3229	3.7	29	27	25	53
1.4	4408	4150	3838	3.4	47	44	41	61	2939	2767	2558	4.1	31	30	27	54
1.6	3603	3392	3137	3.7	50	47	44	62	2402	2262	2091	4.6	34	32	29	55
1.8	3016	2840	2626	4.1	53	50	46	63	2011	1893	1750	5.0	36	33	31	56
2.0	2572	2422	2240	4.4	56	53	49	63	1715	1615	1493	5.4	37	35	33	57
2.2	2228	2097	1939	4.8	59	55	51	64	1485	1398	1293	5.8	39	37	34	58
2.4	1953	1839	1701	5.1	61	58	53	65	1302	1226	1134	6.2	41	39	36	58
2.6	1731	1630	1507	5.4	64	60	56	65	1154	1086	1005	6.6	43	40	37	59
2.8	1548	1457	1347	5.7	66	62	58	66	1032	971	898	7.0	44	42	38	60
3.0	1395	1313	1214	6.0	68	64	60	67	930	875	809	7.4	46	43	40	60
3.2	1265	1191	1101	6.3	71	67	62	67	843	794	734	7.7	47	44	41	61
3.4	1154	1087	1005	6.6	73	69	63	67	770	725	670	8.1	49	46	42	61
3.6	1059	997	922	6.9	75	70	65	68	706	665	615	8.4	50	47	43	61
3.8	976	919	850	7.2	77	72	67	68	651	613	566	8.8	51	48	45	62
4.0	903	850	786	7.5	79	74	69	69	602	567	524	9.1	53	49	46	62
4.2	839	790	730	7.7	81	76	70	69	559	527	487	9.5	54	51	47	63
4.4	782	736	681	8.0	83	78	72	70	521	491	454	9.8	55	52	48	63
4.6	731	689	637	8.3	84	79	73	70	488	459	424	10.2	56	53	49	63
4.8	686	646	597	8.6	86	81	75	70	457	430	398	10.5	57	54	50	64
5.0	645	607	561	8.8	88	83	77	71	430	405	374	10.8	59	55	51	64
5.2	608	572	529	9.1	90	84	78	71	405	381	353	11.1	60	56	52	64
5.4	574	541	500	9.4	91	86	79	71	383	360	333	11.5	61	57	53	65
5.6	543	512	473	9.6	93	88	81	71	362	341	315	11.8	62	58	54	65
5.8	515	485	449	9.9	95	89	82	72	344	323	299	12.1	63	59	55	65
6.0	490	461	426	10.1	96	91	84	72	326	307	284	12.4	64	60	56	65
6.2	466	439	406	10.4	98	92	85	72	311	292	270	12.7	65	61	57	66
6.4	444	418	387	10.6	99	93	86	72	296	279	258	13.0	66	62	58	66
6.6	424	399	369	10.9	101	95	88	73	283	266	246	13.3	67	63	58	66
6.8	405	382	353	11.1	102	96	89	73	270	254	235	13.6	68	64	59	66
7.0	388	365	338	11.4	104	98	90	73	259	244	225	13.9	69	65	60	67
7.2	372	350	324	11.6	105	99	92	73	248	233	216	14.2	70	66	61	67
7.4	357	336	311	11.9	107	100	93	74	238	224	207	14.5	71	67	62	67
7.6	343	323	298	12.1	108	102	94	74	228	215	199	14.8	72	68	63	67
7.8	329	310	287	12.4	109	103	95	74	220	207	191	15.1	73	69	63	68
8.0	317	299	276	12.6	111	104	96	74	211	199	184	15.4	74	69	64	68
8.2	306	288	266	12.8	112	105	98	74	204	192	177	15.7	75	70	65	68
8.4	295	277	256	13.1	113	107	99	75	196	185	171	16.0	76	71	66	68
8.6	284	268	248	13.3	115	108	100	75	190	178	165	16.3	76	72	67	68
8.8	275	259	239	13.5	116	109	101	75	183	172	159	16.6	77	73	67	68
9.0	265	250	231	13.8	117	110	102	75	177	167	154	16.9	78	74	68	69
9.2	257	242	224	14.0	119	112	103	75	171	161	149	17.1	79	74	69	69
9.4	249	234	216	14.2	120	113	104	75	166	156	144	17.4	80	75	70	69
9.6	241	227	210	14.5	121	114	105	76	161	151	140	17.7	81	76	70	69
9.8	233	220	203	14.7	122	115	106	76	156	147	135	18.0	82	77	71	69
10.0	226	213	197	14.9	123	116	108	76	151	142	131	18.3	82	78	72	69
10.5	210	198	183	15.5	126	119	110	76	140	132	122	18.9	84	79	73	70
11.0	196	185	171	16.0	129	122	113	77	131	123	114	19.6	86	81	75	70

Table 85: Stocking levels for Douglas-fir in the ABGR/CAGE plant association (full stocking = 301).

	UPPER MANAGEMENT ZONE (SDI = 226)								LOWER MANAGEMENT ZONE (SDI = 151)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	183	173	160	16.6	132	125	115	77	122	115	106	20.3	88	83	77	71
12.0	172	162	150	17.1	135	127	118	77	115	108	100	20.9	90	85	78	71
12.5	162	152	141	17.6	138	130	120	78	108	101	94	21.6	92	86	80	71
13.0	152	143	133	18.2	140	132	122	78	102	96	88	22.3	94	88	82	72
13.5	144	135	125	18.7	143	135	125	78	96	90	84	22.9	95	90	83	72
14.0	136	128	119	19.2	146	137	127	79	91	86	79	23.5	97	91	85	72
14.5	129	122	112	19.7	148	139	129	79	86	81	75	24.2	99	93	86	72
15.0	123	116	107	20.2	151	142	131	79	82	77	71	24.8	100	95	87	73
15.5	117	110	102	20.8	153	144	133	79	78	73	68	25.4	102	96	89	73
16.0	111	105	97	21.3	155	146	135	80	74	70	65	26.0	104	98	90	73
16.5	106	100	93	21.8	158	149	137	80	71	67	62	26.6	105	99	92	73
17.0	102	96	88	22.2	160	151	139	80	68	64	59	27.3	107	101	93	74
17.5	97	92	85	22.7	162	153	141	80	65	61	56	27.9	108	102	94	74
18.0	93	88	81	23.2	165	155	143	81	62	59	54	28.5	110	103	96	74
18.5	89	84	78	23.7	167	157	145	81	60	56	52	29.0	111	105	97	74
19.0	86	81	75	24.2	169	159	147	81	57	54	50	29.6	113	106	98	75
19.5	83	78	72	24.7	171	161	149	81	55	52	48	30.2	114	108	99	75
20.0	79	75	69	25.2	173	163	151	81	53	50	46	30.8	116	109	101	75
20.5	77	72	67	25.6	176	165	153	82	51	48	44	31.4	117	110	102	75
21.0	74	70	64	26.1	178	167	155	82	49	46	43	32.0	118	111	103	75
21.5	71	67	62	26.6	180	169	156	82	48	45	41	32.5	120	113	104	75
22.0	69	65	60	27.0	182	171	158	82	46	43	40	33.1	121	114	105	76
22.5	67	63	58	27.5	184	173	160	82	44	42	39	33.7	122	115	107	76
23.0	64	61	56	28.0	186	175	162	83	43	40	37	34.2	124	117	108	76
23.5	62	59	54	28.4	188	177	163	83	42	39	36	34.8	125	118	109	76
24.0	60	57	53	28.9	190	179	165	83	40	38	35	35.4	126	119	110	76
24.5	59	55	51	29.3	192	180	167	83	39	37	34	35.9	128	120	111	77
25.0	57	53	49	29.8	193	182	168	83	38	36	33	36.5	129	121	112	77
25.5	55	52	48	30.2	195	184	170	83	37	35	32	37.0	130	123	113	77
26.0	53	50	47	30.7	197	186	172	84	36	34	31	37.6	131	124	114	77
26.5	52	49	45	31.1	199	187	173	84	35	33	30	38.1	133	125	116	77
27.0	51	48	44	31.6	201	189	175	84	34	32	29	38.6	134	126	117	77
27.5	49	46	43	32.0	203	191	176	84	33	31	29	39.2	135	127	118	77
28.0	48	45	42	32.4	205	193	178	84	32	30	28	39.7	136	128	119	78
28.5	47	44	41	32.9	206	194	180	84	31	29	27	40.3	138	129	120	78
29.0	45	43	39	33.3	208	196	181	84	30	28	26	40.8	139	131	121	78
30.0	43	41	38	34.2	212	199	184	85	29	27	25	41.8	141	133	123	78

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CD" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 86: Stocking levels for grand fir in the ABGR/CAGE plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22524	21206	19609	1.5	123	116	107	80	15016	14137	13073	1.8	82	77	71	73
1.2	16431	15469	14304	1.7	129	121	112	81	10954	10313	9536	2.1	86	81	75	74
1.4	12584	11848	10956	2.0	135	127	117	82	8390	7899	7304	2.4	90	84	78	75
1.6	9989	9404	8696	2.2	139	131	121	83	6659	6270	5797	2.7	93	88	81	75
1.8	8147	7671	7093	2.5	144	136	125	83	5432	5114	4729	3.0	96	90	84	76
2.0	6790	6393	5911	2.7	148	139	129	84	4527	4262	3941	3.3	99	93	86	77
2.2	5758	5421	5013	3.0	152	143	132	84	3838	3614	3342	3.6	101	95	88	77
2.4	4953	4663	4312	3.2	156	147	135	85	3302	3109	2875	3.9	104	98	90	77
2.6	4313	4060	3755	3.4	159	150	138	85	2875	2707	2503	4.2	106	100	92	78
2.8	3794	3572	3303	3.6	162	153	141	85	2529	2381	2202	4.5	108	102	94	78
3.0	3367	3170	2931	3.9	165	156	144	86	2245	2113	1954	4.7	110	104	96	78
3.2	3011	2835	2621	4.1	168	158	146	86	2007	1890	1748	5.0	112	106	98	79
3.4	2711	2553	2360	4.3	171	161	149	86	1808	1702	1574	5.3	114	107	99	79
3.6	2456	2312	2138	4.5	174	163	151	87	1637	1542	1425	5.5	116	109	101	79
3.8	2237	2106	1947	4.7	176	166	153	87	1491	1404	1298	5.8	117	111	102	80
4.0	2047	1927	1782	5.0	179	168	156	87	1365	1285	1188	6.1	119	112	104	80
4.2	1881	1771	1638	5.2	181	170	158	87	1254	1181	1092	6.3	121	114	105	80
4.4	1736	1634	1511	5.4	183	173	160	88	1157	1089	1007	6.6	122	115	106	80
4.6	1607	1513	1399	5.6	185	175	161	88	1071	1009	933	6.9	124	116	108	81
4.8	1493	1406	1300	5.8	188	177	163	88	995	937	867	7.1	125	118	109	81
5.0	1391	1310	1211	6.0	190	179	165	88	928	873	808	7.4	126	119	110	81
5.2	1300	1224	1132	6.2	192	181	167	88	867	816	755	7.6	128	120	111	81
5.4	1218	1147	1060	6.4	194	182	169	89	812	764	707	7.9	129	122	112	81
5.6	1144	1077	996	6.6	196	184	170	89	762	718	664	8.1	130	123	114	81
5.8	1076	1013	937	6.8	197	186	172	89	717	676	625	8.4	132	124	115	82
6.0	1015	956	884	7.0	199	188	173	89	677	637	589	8.6	133	125	116	82
6.2	959	903	835	7.2	201	189	175	89	639	602	557	8.9	134	126	117	82
6.4	908	855	790	7.4	203	191	177	89	605	570	527	9.1	135	127	118	82
6.6	861	810	749	7.6	204	193	178	90	574	540	500	9.4	136	128	119	82
6.8	817	770	712	7.8	206	194	179	90	545	513	474	9.6	137	129	120	82
7.0	777	732	677	8.0	208	196	181	90	518	488	451	9.9	139	130	121	83
7.2	740	697	645	8.2	209	197	182	90	494	465	430	10.1	140	131	121	83
7.4	706	665	615	8.4	211	199	184	90	471	443	410	10.3	141	132	122	83
7.6	674	635	587	8.6	212	200	185	90	450	423	391	10.6	142	133	123	83
7.8	645	607	561	8.8	214	201	186	90	430	405	374	10.8	143	134	124	83
8.0	617	581	537	9.0	215	203	188	90	411	387	358	11.1	144	135	125	83
8.2	591	557	515	9.2	217	204	189	91	394	371	343	11.3	145	136	126	83
8.4	567	534	494	9.4	218	205	190	91	378	356	329	11.5	145	137	127	83
8.6	544	513	474	9.6	220	207	191	91	363	342	316	11.8	146	138	127	84
8.8	523	493	456	9.8	221	208	192	91	349	328	304	12.0	147	139	128	84
9.0	503	474	438	10.0	222	209	194	91	336	316	292	12.2	148	140	129	84
9.2	484	456	422	10.2	224	211	195	91	323	304	281	12.5	149	140	130	84
9.4	467	439	406	10.4	225	212	196	91	311	293	271	12.7	150	141	131	84
9.6	450	424	392	10.6	226	213	197	91	300	283	261	12.9	151	142	131	84
9.8	434	409	378	10.8	228	214	198	91	290	273	252	13.2	152	143	132	84
10.0	419	395	365	11.0	229	215	199	92	280	263	243	13.4	153	144	133	84
10.5	385	363	336	11.4	232	218	202	92	257	242	224	14.0	155	145	135	85

Table 86: Stocking levels for grand fir in the ABGR/CAGE plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	356	335	310	11.9	235	221	204	92	237	223	206	14.6	156	147	136	85
11.5	329	310	287	12.4	238	224	207	92	220	207	191	15.1	158	149	138	85
12.0	306	288	266	12.8	240	226	209	92	204	192	178	15.7	160	151	139	85
12.5	285	268	248	13.3	243	229	212	93	190	179	165	16.3	162	152	141	85
13.0	266	251	232	13.7	246	231	214	93	178	167	155	16.8	164	154	143	86
13.5	250	235	217	14.2	248	234	216	93	166	157	145	17.4	165	156	144	86
14.0	234	221	204	14.7	251	236	218	93	156	147	136	17.9	167	157	145	86
14.5	221	208	192	15.1	253	238	220	93	147	138	128	18.5	169	159	147	86
15.0	208	196	181	15.6	255	240	222	94	139	131	121	19.0	170	160	148	86
15.5	197	185	171	16.0	257	242	224	94	131	123	114	19.6	172	162	149	86
16.0	186	175	162	16.4	260	245	226	94	124	117	108	20.1	173	163	151	87
16.5	176	166	154	16.9	262	247	228	94	118	111	102	20.7	175	164	152	87
17.0	167	158	146	17.3	264	249	230	94	112	105	97	21.2	176	166	153	87
17.5	159	150	139	17.8	266	250	232	94	106	100	92	21.8	177	167	154	87
18.0	152	143	132	18.2	268	252	233	94	101	95	88	22.3	179	168	156	87
18.5	145	136	126	18.6	270	254	235	95	96	91	84	22.8	180	170	157	87
19.0	138	130	120	19.1	272	256	237	95	92	87	80	23.4	181	171	158	87
19.5	132	124	115	19.5	274	258	239	95	88	83	77	23.9	183	172	159	88
20.0	126	119	110	19.9	276	260	240	95	84	79	73	24.4	184	173	160	88
20.5	121	114	105	20.4	278	261	242	95	81	76	70	25.0	185	174	161	88
21.0	116	109	101	20.8	279	263	243	95	77	73	67	25.5	186	175	162	88
21.5	112	105	97	21.2	281	265	245	95	74	70	65	26.0	188	177	163	88
22.0	107	101	93	21.7	283	266	246	95	71	67	62	26.5	189	178	164	88
22.5	103	97	90	22.1	285	268	248	96	69	65	60	27.0	190	179	165	88
23.0	99	93	86	22.5	286	270	249	96	66	62	58	27.6	191	180	166	88
23.5	96	90	83	22.9	288	271	251	96	64	60	56	28.1	192	181	167	88
24.0	92	87	80	23.4	290	273	252	96	61	58	54	28.6	193	182	168	89
24.5	89	84	77	23.8	291	274	254	96	59	56	52	29.1	194	183	169	89
25.0	86	81	75	24.2	293	276	255	96	57	54	50	29.6	195	184	170	89
25.5	83	78	72	24.6	295	277	256	96	55	52	48	30.1	196	185	171	89
26.0	80	76	70	25.0	296	279	258	96	54	50	47	30.7	197	186	172	89
26.5	78	73	68	25.4	298	280	259	96	52	49	45	31.2	198	187	173	89
27.0	75	71	65	25.9	299	282	260	96	50	47	44	31.7	199	188	174	89
27.5	73	69	63	26.3	301	283	262	96	49	46	42	32.2	200	189	174	89
28.0	71	67	61	26.7	302	284	263	97	47	44	41	32.7	201	190	175	89
28.5	69	65	60	27.1	304	286	264	97	46	43	40	33.2	202	191	176	89
29.0	66	63	58	27.5	305	287	265	97	44	42	39	33.7	203	191	177	89
30.0	63	59	55	28.3	308	290	268	97	42	39	36	34.7	205	193	179	90

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 87: Stocking levels for western larch in the ABGR/BRVU plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	16520	15553	14382	1.7	90	85	78	62	11013	10369	9588	2.1	60	57	52	54
1.2	12051	11346	10492	2.0	95	89	82	63	8034	7564	6994	2.5	63	59	55	55
1.4	9230	8690	8036	2.3	99	93	86	63	6153	5793	5357	2.9	66	62	57	56
1.6	7326	6898	6378	2.6	102	96	89	64	4884	4598	4252	3.2	68	64	59	57
1.8	5976	5626	5202	2.9	106	99	92	64	3984	3751	3468	3.6	70	66	61	57
2.0	4980	4689	4336	3.2	109	102	95	65	3320	3126	2890	3.9	72	68	63	58
2.2	4223	3976	3676	3.5	111	105	97	65	2815	2651	2451	4.2	74	70	65	58
2.4	3633	3420	3163	3.7	114	107	99	66	2422	2280	2108	4.6	76	72	66	59
2.6	3163	2978	2754	4.0	117	110	102	66	2109	1985	1836	4.9	78	73	68	59
2.8	2782	2620	2422	4.3	119	112	104	67	1855	1746	1615	5.2	79	75	69	59
3.0	2469	2325	2150	4.5	121	114	106	67	1646	1550	1433	5.5	81	76	70	60
3.2	2208	2079	1923	4.8	123	116	107	67	1472	1386	1282	5.8	82	77	72	60
3.4	1989	1872	1731	5.0	125	118	109	68	1326	1248	1154	6.2	84	79	73	60
3.6	1801	1696	1568	5.3	127	120	111	68	1201	1131	1046	6.5	85	80	74	61
3.8	1641	1545	1428	5.5	129	122	112	68	1094	1030	952	6.8	86	81	75	61
4.0	1501	1413	1307	5.8	131	123	114	68	1001	942	871	7.1	87	82	76	61
4.2	1380	1299	1201	6.0	133	125	116	69	920	866	801	7.4	88	83	77	61
4.4	1273	1199	1108	6.3	134	127	117	69	849	799	739	7.7	90	84	78	62
4.6	1179	1110	1026	6.5	136	128	118	69	786	740	684	8.0	91	85	79	62
4.8	1095	1031	953	6.8	138	130	120	69	730	687	636	8.3	92	86	80	62
5.0	1020	961	888	7.0	139	131	121	69	680	640	592	8.6	93	87	81	62
5.2	953	898	830	7.3	141	132	122	70	636	598	553	8.9	94	88	82	62
5.4	893	841	778	7.5	142	134	124	70	595	561	518	9.2	95	89	82	63
5.6	839	790	730	7.7	143	135	125	70	559	526	487	9.5	96	90	83	63
5.8	789	743	687	8.0	145	136	126	70	526	495	458	9.8	97	91	84	63
6.0	744	701	648	8.2	146	138	127	70	496	467	432	10.1	97	92	85	63
6.2	703	662	612	8.5	147	139	128	70	469	441	408	10.4	98	93	86	63
6.4	666	627	580	8.7	149	140	129	71	444	418	386	10.6	99	93	86	63
6.6	631	594	550	8.9	150	141	131	71	421	396	366	10.9	100	94	87	63
6.8	599	564	522	9.2	151	142	132	71	400	376	348	11.2	101	95	88	64
7.0	570	537	496	9.4	152	143	133	71	380	358	331	11.5	102	96	88	64
7.2	543	511	473	9.6	154	145	134	71	362	341	315	11.8	102	96	89	64
7.4	518	488	451	9.9	155	146	135	71	345	325	301	12.1	103	97	90	64
7.6	495	466	431	10.1	156	147	136	71	330	310	287	12.4	104	98	90	64
7.8	473	445	412	10.3	157	148	137	72	315	297	274	12.6	105	98	91	64
8.0	453	426	394	10.5	158	149	138	72	302	284	263	12.9	105	99	92	64
8.2	434	408	378	10.8	159	150	138	72	289	272	252	13.2	106	100	92	65
8.4	416	392	362	11.0	160	151	139	72	277	261	241	13.5	107	100	93	65
8.6	399	376	348	11.2	161	152	140	72	266	251	232	13.7	107	101	93	65
8.8	384	361	334	11.4	162	153	141	72	256	241	223	14.0	108	102	94	65
9.0	369	348	321	11.7	163	154	142	72	246	232	214	14.3	109	102	95	65
9.2	355	335	309	11.9	164	154	143	72	237	223	206	14.6	109	103	95	65
9.4	342	322	298	12.1	165	155	144	73	228	215	199	14.8	110	104	96	65
9.6	330	311	287	12.3	166	156	144	73	220	207	192	15.1	111	104	96	65
9.8	319	300	277	12.6	167	157	145	73	212	200	185	15.4	111	105	97	65
10.0	308	290	268	12.8	168	158	146	73	205	193	179	15.7	112	105	97	66
10.5	283	266	246	13.3	170	160	148	73	188	177	164	16.3	113	107	99	66
11.0	261	246	227	13.9	172	162	150	73	174	164	151	17.0	115	108	100	66

Table 87: Stocking levels for western larch in the ABGR/BRVU plant association (full stocking = 410).

	UPPER MANAGEMENT ZONE (SDI = 308)								LOWER MANAGEMENT ZONE (SDI = 205)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	242	227	210	14.4	174	164	152	73	161	152	140	17.7	116	109	101	66
12.0	224	211	195	15.0	176	166	153	74	150	141	130	18.3	117	111	102	66
12.5	209	197	182	15.5	178	168	155	74	139	131	121	19.0	119	112	103	67
13.0	195	184	170	16.0	180	170	157	74	130	123	113	19.7	120	113	105	67
13.5	183	172	159	16.6	182	171	158	74	122	115	106	20.3	121	114	106	67
14.0	172	162	150	17.1	184	173	160	74	115	108	100	21.0	122	115	107	67
14.5	162	152	141	17.6	185	175	161	75	108	102	94	21.6	124	116	108	67
15.0	153	144	133	18.2	187	176	163	75	102	96	89	22.2	125	117	109	67
15.5	144	136	125	18.7	189	178	164	75	96	90	84	22.9	126	119	110	68
16.0	136	128	119	19.2	190	179	166	75	91	86	79	23.5	127	120	111	68
16.5	129	122	113	19.7	192	181	167	75	86	81	75	24.2	128	121	111	68
17.0	123	116	107	20.2	194	182	169	75	82	77	71	24.8	129	122	112	68
17.5	117	110	102	20.7	195	184	170	76	78	73	68	25.4	130	122	113	68
18.0	111	105	97	21.3	197	185	171	76	74	70	65	26.0	131	123	114	68
18.5	106	100	92	21.8	198	187	172	76	71	67	62	26.7	132	124	115	68
19.0	101	95	88	22.3	200	188	174	76	68	64	59	27.3	133	125	116	69
19.5	97	91	84	22.8	201	189	175	76	65	61	56	27.9	134	126	117	69
20.0	93	87	81	23.3	202	190	176	76	62	58	54	28.5	135	127	117	69
20.5	89	84	77	23.8	204	192	177	76	59	56	52	29.1	136	128	118	69
21.0	85	80	74	24.3	205	193	178	76	57	53	49	29.8	137	129	119	69
21.5	82	77	71	24.8	206	194	180	77	55	51	47	30.4	138	129	120	69
22.0	79	74	68	25.3	208	195	181	77	52	49	46	31.0	138	130	120	69
22.5	76	71	66	25.8	209	197	182	77	50	47	44	31.6	139	131	121	69
23.0	73	69	63	26.3	210	198	183	77	49	46	42	32.2	140	132	122	70
23.5	70	66	61	26.8	211	199	184	77	47	44	41	32.8	141	133	123	70
24.0	68	64	59	27.3	213	200	185	77	45	42	39	33.4	142	133	123	70
24.5	65	61	57	27.8	214	201	186	77	44	41	38	34.0	142	134	124	70
25.0	63	59	55	28.2	215	202	187	77	42	40	37	34.6	143	135	125	70
25.5	61	57	53	28.7	216	203	188	77	41	38	35	35.2	144	136	125	70
26.0	59	55	51	29.2	217	204	189	77	39	37	34	35.8	145	136	126	70
26.5	57	54	50	29.7	218	206	190	78	38	36	33	36.4	146	137	127	70
27.0	55	52	48	30.2	219	207	191	78	37	35	32	37.0	146	138	127	70
27.5	53	50	47	30.7	220	208	192	78	36	34	31	37.6	147	138	128	70
28.0	52	49	45	31.2	222	209	193	78	35	33	30	38.2	148	139	129	71
28.5	50	47	44	31.6	223	210	194	78	33	32	29	38.7	148	140	129	71
29.0	49	46	42	32.1	224	211	195	78	33	31	28	39.3	149	140	130	71
30.0	46	43	40	33.1	226	213	197	78	31	29	27	40.5	150	142	131	71

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CL" equation from Dealy (1985) and the basal area per acre for an even-aged structure (EA columns).

Table 88: Stocking levels for Engelmann spruce in the ABGR/BRVU plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	18813	17713	16379	1.6	103	97	89	75	12542	11808	10919	2.0	68	64	60	68
1.2	13724	12921	11948	1.9	108	101	94	76	9149	8614	7965	2.3	72	68	63	69
1.4	10511	9897	9151	2.2	112	106	98	77	7008	6598	6101	2.7	75	71	65	70
1.6	8343	7855	7264	2.5	116	110	101	78	5562	5237	4842	3.0	78	73	68	71
1.8	6805	6407	5925	2.7	120	113	105	78	4537	4271	3950	3.3	80	75	70	71
2.0	5671	5340	4937	3.0	124	116	108	79	3781	3560	3292	3.6	82	78	72	72
2.2	4809	4528	4187	3.2	127	120	111	79	3206	3019	2791	4.0	85	80	74	72
2.4	4137	3895	3602	3.5	130	122	113	80	2758	2597	2401	4.3	87	82	75	73
2.6	3602	3391	3136	3.7	133	125	116	80	2401	2261	2091	4.6	89	83	77	73
2.8	3169	2983	2759	4.0	135	128	118	80	2112	1989	1839	4.9	90	85	79	73
3.0	2812	2648	2448	4.2	138	130	120	81	1875	1765	1632	5.2	92	87	80	74
3.2	2515	2368	2190	4.5	140	132	122	81	1677	1579	1460	5.5	94	88	82	74
3.4	2265	2132	1972	4.7	143	134	124	81	1510	1421	1314	5.8	95	90	83	74
3.6	2051	1931	1786	5.0	145	137	126	82	1368	1288	1191	6.1	97	91	84	74
3.8	1868	1759	1627	5.2	147	139	128	82	1246	1173	1084	6.4	98	92	85	75
4.0	1710	1610	1488	5.4	149	140	130	82	1140	1073	992	6.6	99	94	87	75
4.2	1571	1479	1368	5.7	151	142	132	82	1047	986	912	6.9	101	95	88	75
4.4	1450	1365	1262	5.9	153	144	133	82	966	910	841	7.2	102	96	89	75
4.6	1342	1264	1169	6.1	155	146	135	83	895	843	779	7.5	103	97	90	76
4.8	1247	1174	1086	6.4	157	148	136	83	831	783	724	7.8	104	98	91	76
5.0	1162	1094	1012	6.6	158	149	138	83	775	729	674	8.1	106	99	92	76
5.2	1086	1022	945	6.8	160	151	139	83	724	682	630	8.3	107	101	93	76
5.4	1017	958	886	7.0	162	152	141	83	678	638	590	8.6	108	102	94	76
5.6	955	899	832	7.3	163	154	142	84	637	600	554	8.9	109	103	95	77
5.8	899	846	783	7.5	165	155	144	84	599	564	522	9.2	110	104	96	77
6.0	848	798	738	7.7	166	157	145	84	565	532	492	9.4	111	104	97	77
6.2	801	754	697	7.9	168	158	146	84	534	503	465	9.7	112	105	97	77
6.4	758	714	660	8.1	169	159	147	84	505	476	440	10.0	113	106	98	77
6.6	719	677	626	8.4	171	161	149	84	479	451	417	10.2	114	107	99	77
6.8	683	643	594	8.6	172	162	150	85	455	429	396	10.5	115	108	100	77
7.0	649	611	565	8.8	174	163	151	85	433	408	377	10.8	116	109	101	78
7.2	618	582	538	9.0	175	165	152	85	412	388	359	11.0	117	110	101	78
7.4	590	555	513	9.2	176	166	153	85	393	370	342	11.3	117	111	102	78
7.6	563	530	490	9.5	177	167	154	85	375	353	327	11.6	118	111	103	78
7.8	538	507	469	9.7	179	168	156	85	359	338	313	11.8	119	112	104	78
8.0	515	485	449	9.9	180	169	157	85	344	323	299	12.1	120	113	104	78
8.2	494	465	430	10.1	181	171	158	85	329	310	287	12.4	121	114	105	78
8.4	474	446	412	10.3	182	172	159	86	316	297	275	12.6	122	114	106	78
8.6	455	428	396	10.5	183	173	160	86	303	285	264	12.9	122	115	106	79
8.8	437	411	380	10.7	185	174	161	86	291	274	254	13.1	123	116	107	79
9.0	420	396	366	10.9	186	175	162	86	280	264	244	13.4	124	117	108	79
9.2	405	381	352	11.1	187	176	163	86	270	254	235	13.7	125	117	108	79
9.4	390	367	339	11.4	188	177	164	86	260	245	226	13.9	125	118	109	79
9.6	376	354	327	11.6	189	178	165	86	251	236	218	14.2	126	119	110	79
9.8	363	342	316	11.8	190	179	165	86	242	228	211	14.4	127	119	110	79
10.0	350	330	305	12.0	191	180	166	86	234	220	203	14.7	127	120	111	79
10.5	322	303	280	12.5	194	182	169	87	215	202	187	15.3	129	122	112	79

Table 88: Stocking levels for Engelmann spruce in the ABGR/BRVU plant association (full stocking = 469).

	UPPER MANAGEMENT ZONE (SDI = 352)								LOWER MANAGEMENT ZONE (SDI = 235)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.0	297	280	259	13.0	196	185	171	87	198	186	172	15.9	131	123	114	80
11.5	275	259	239	13.5	198	187	173	87	183	173	160	16.6	132	125	115	80
12.0	256	241	222	14.0	201	189	175	87	170	160	148	17.2	134	126	116	80
12.5	238	224	207	14.5	203	191	177	87	159	149	138	17.8	135	127	118	80
13.0	223	209	194	15.0	205	193	179	88	148	140	129	18.4	137	129	119	80
13.5	208	196	181	15.5	207	195	180	88	139	131	121	19.0	138	130	120	81
14.0	196	184	170	16.0	209	197	182	88	130	123	114	19.6	139	131	121	81
14.5	184	173	160	16.5	211	199	184	88	123	116	107	20.2	141	133	123	81
15.0	174	164	151	17.0	213	201	186	88	116	109	101	20.8	142	134	124	81
15.5	164	155	143	17.5	215	202	187	88	109	103	95	21.4	143	135	125	81
16.0	155	146	135	18.0	217	204	189	89	104	98	90	22.0	145	136	126	81
16.5	147	139	128	18.5	219	206	190	89	98	92	85	22.6	146	137	127	82
17.0	140	132	122	19.0	221	208	192	89	93	88	81	23.2	147	138	128	82
17.5	133	125	116	19.4	222	209	193	89	89	84	77	23.8	148	139	129	82
18.0	127	119	110	19.9	224	211	195	89	84	80	74	24.4	149	141	130	82
18.5	121	114	105	20.4	226	212	196	89	81	76	70	25.0	150	142	131	82
19.0	115	109	100	20.9	227	214	198	89	77	72	67	25.6	151	143	132	82
19.5	110	104	96	21.4	229	215	199	89	74	69	64	26.2	153	144	133	82
20.0	106	99	92	21.8	230	217	201	90	70	66	61	26.7	154	145	134	83
20.5	101	95	88	22.3	232	218	202	90	67	64	59	27.3	155	146	135	83
21.0	97	91	84	22.8	233	220	203	90	65	61	56	27.9	156	147	135	83
21.5	93	88	81	23.2	235	221	205	90	62	58	54	28.5	157	147	136	83
22.0	90	84	78	23.7	236	223	206	90	60	56	52	29.0	158	148	137	83
22.5	86	81	75	24.2	238	224	207	90	57	54	50	29.6	159	149	138	83
23.0	83	78	72	24.6	239	225	208	90	55	52	48	30.2	160	150	139	83
23.5	80	75	70	25.1	241	227	210	90	53	50	46	30.7	160	151	140	83
24.0	77	73	67	25.6	242	228	211	90	51	48	45	31.3	161	152	140	83
24.5	74	70	65	26.0	243	229	212	91	50	47	43	31.9	162	153	141	83
25.0	72	68	62	26.5	245	230	213	91	48	45	42	32.4	163	154	142	84
25.5	69	65	60	26.9	246	232	214	91	46	44	40	33.0	164	154	143	84
26.0	67	63	58	27.4	247	233	215	91	45	42	39	33.5	165	155	144	84
26.5	65	61	57	27.8	249	234	216	91	43	41	38	34.1	166	156	144	84
27.0	63	59	55	28.3	250	235	218	91	42	39	36	34.7	167	157	145	84
27.5	61	57	53	28.7	251	236	219	91	41	38	35	35.2	167	158	146	84
28.0	59	56	51	29.2	252	238	220	91	39	37	34	35.8	168	158	146	84
28.5	57	54	50	29.6	254	239	221	91	38	36	33	36.3	169	159	147	84
29.0	56	52	48	30.1	255	240	222	91	37	35	32	36.9	170	160	148	84
30.0	52	49	46	31.0	257	242	224	92	35	33	30	38.0	171	161	149	84

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CE" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).

Table 89: Stocking levels for grand fir in the ABGR/BRVU plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
1.0	22524	21206	19609	1.5	123	116	107	80	15016	14137	13073	1.8	82	77	71	73
1.2	16431	15469	14304	1.7	129	121	112	81	10954	10313	9536	2.1	86	81	75	74
1.4	12584	11848	10956	2.0	135	127	117	82	8390	7899	7304	2.4	90	84	78	75
1.6	9989	9404	8696	2.2	139	131	121	83	6659	6270	5797	2.7	93	88	81	75
1.8	8147	7671	7093	2.5	144	136	125	83	5432	5114	4729	3.0	96	90	84	76
2.0	6790	6393	5911	2.7	148	139	129	84	4527	4262	3941	3.3	99	93	86	77
2.2	5758	5421	5013	3.0	152	143	132	84	3838	3614	3342	3.6	101	95	88	77
2.4	4953	4663	4312	3.2	156	147	135	85	3302	3109	2875	3.9	104	98	90	77
2.6	4313	4060	3755	3.4	159	150	138	85	2875	2707	2503	4.2	106	100	92	78
2.8	3794	3572	3303	3.6	162	153	141	85	2529	2381	2202	4.5	108	102	94	78
3.0	3367	3170	2931	3.9	165	156	144	86	2245	2113	1954	4.7	110	104	96	78
3.2	3011	2835	2621	4.1	168	158	146	86	2007	1890	1748	5.0	112	106	98	79
3.4	2711	2553	2360	4.3	171	161	149	86	1808	1702	1574	5.3	114	107	99	79
3.6	2456	2312	2138	4.5	174	163	151	87	1637	1542	1425	5.5	116	109	101	79
3.8	2237	2106	1947	4.7	176	166	153	87	1491	1404	1298	5.8	117	111	102	80
4.0	2047	1927	1782	5.0	179	168	156	87	1365	1285	1188	6.1	119	112	104	80
4.2	1881	1771	1638	5.2	181	170	158	87	1254	1181	1092	6.3	121	114	105	80
4.4	1736	1634	1511	5.4	183	173	160	88	1157	1089	1007	6.6	122	115	106	80
4.6	1607	1513	1399	5.6	185	175	161	88	1071	1009	933	6.9	124	116	108	81
4.8	1493	1406	1300	5.8	188	177	163	88	995	937	867	7.1	125	118	109	81
5.0	1391	1310	1211	6.0	190	179	165	88	928	873	808	7.4	126	119	110	81
5.2	1300	1224	1132	6.2	192	181	167	88	867	816	755	7.6	128	120	111	81
5.4	1218	1147	1060	6.4	194	182	169	89	812	764	707	7.9	129	122	112	81
5.6	1144	1077	996	6.6	196	184	170	89	762	718	664	8.1	130	123	114	81
5.8	1076	1013	937	6.8	197	186	172	89	717	676	625	8.4	132	124	115	82
6.0	1015	956	884	7.0	199	188	173	89	677	637	589	8.6	133	125	116	82
6.2	959	903	835	7.2	201	189	175	89	639	602	557	8.9	134	126	117	82
6.4	908	855	790	7.4	203	191	177	89	605	570	527	9.1	135	127	118	82
6.6	861	810	749	7.6	204	193	178	90	574	540	500	9.4	136	128	119	82
6.8	817	770	712	7.8	206	194	179	90	545	513	474	9.6	137	129	120	82
7.0	777	732	677	8.0	208	196	181	90	518	488	451	9.9	139	130	121	83
7.2	740	697	645	8.2	209	197	182	90	494	465	430	10.1	140	131	121	83
7.4	706	665	615	8.4	211	199	184	90	471	443	410	10.3	141	132	122	83
7.6	674	635	587	8.6	212	200	185	90	450	423	391	10.6	142	133	123	83
7.8	645	607	561	8.8	214	201	186	90	430	405	374	10.8	143	134	124	83
8.0	617	581	537	9.0	215	203	188	90	411	387	358	11.1	144	135	125	83
8.2	591	557	515	9.2	217	204	189	91	394	371	343	11.3	145	136	126	83
8.4	567	534	494	9.4	218	205	190	91	378	356	329	11.5	145	137	127	83
8.6	544	513	474	9.6	220	207	191	91	363	342	316	11.8	146	138	127	84
8.8	523	493	456	9.8	221	208	192	91	349	328	304	12.0	147	139	128	84
9.0	503	474	438	10.0	222	209	194	91	336	316	292	12.2	148	140	129	84
9.2	484	456	422	10.2	224	211	195	91	323	304	281	12.5	149	140	130	84
9.4	467	439	406	10.4	225	212	196	91	311	293	271	12.7	150	141	131	84
9.6	450	424	392	10.6	226	213	197	91	300	283	261	12.9	151	142	131	84
9.8	434	409	378	10.8	228	214	198	91	290	273	252	13.2	152	143	132	84
10.0	419	395	365	11.0	229	215	199	92	280	263	243	13.4	153	144	133	84
10.5	385	363	336	11.4	232	218	202	92	257	242	224	14.0	155	145	135	85
11.0	356	335	310	11.9	235	221	204	92	237	223	206	14.6	156	147	136	85

Table 89: Stocking levels for grand fir in the ABGR/BRVU plant association (full stocking = 560).

	UPPER MANAGEMENT ZONE (SDI = 420)								LOWER MANAGEMENT ZONE (SDI = 280)							
	TREES/ACRE				BASAL AREA/ACRE				TREES/ACRE				BASAL AREA/ACRE			
QMD	EA	IS	UA	ES	EA	IS	UA	CC	EA	IS	UA	ES	EA	IS	UA	CC
11.5	329	310	287	12.4	238	224	207	92	220	207	191	15.1	158	149	138	85
12.0	306	288	266	12.8	240	226	209	92	204	192	178	15.7	160	151	139	85
12.5	285	268	248	13.3	243	229	212	93	190	179	165	16.3	162	152	141	85
13.0	266	251	232	13.7	246	231	214	93	178	167	155	16.8	164	154	143	86
13.5	250	235	217	14.2	248	234	216	93	166	157	145	17.4	165	156	144	86
14.0	234	221	204	14.7	251	236	218	93	156	147	136	17.9	167	157	145	86
14.5	221	208	192	15.1	253	238	220	93	147	138	128	18.5	169	159	147	86
15.0	208	196	181	15.6	255	240	222	94	139	131	121	19.0	170	160	148	86
15.5	197	185	171	16.0	257	242	224	94	131	123	114	19.6	172	162	149	86
16.0	186	175	162	16.4	260	245	226	94	124	117	108	20.1	173	163	151	87
16.5	176	166	154	16.9	262	247	228	94	118	111	102	20.7	175	164	152	87
17.0	167	158	146	17.3	264	249	230	94	112	105	97	21.2	176	166	153	87
17.5	159	150	139	17.8	266	250	232	94	106	100	92	21.8	177	167	154	87
18.0	152	143	132	18.2	268	252	233	94	101	95	88	22.3	179	168	156	87
18.5	145	136	126	18.6	270	254	235	95	96	91	84	22.8	180	170	157	87
19.0	138	130	120	19.1	272	256	237	95	92	87	80	23.4	181	171	158	87
19.5	132	124	115	19.5	274	258	239	95	88	83	77	23.9	183	172	159	88
20.0	126	119	110	19.9	276	260	240	95	84	79	73	24.4	184	173	160	88
20.5	121	114	105	20.4	278	261	242	95	81	76	70	25.0	185	174	161	88
21.0	116	109	101	20.8	279	263	243	95	77	73	67	25.5	186	175	162	88
21.5	112	105	97	21.2	281	265	245	95	74	70	65	26.0	188	177	163	88
22.0	107	101	93	21.7	283	266	246	95	71	67	62	26.5	189	178	164	88
22.5	103	97	90	22.1	285	268	248	96	69	65	60	27.0	190	179	165	88
23.0	99	93	86	22.5	286	270	249	96	66	62	58	27.6	191	180	166	88
23.5	96	90	83	22.9	288	271	251	96	64	60	56	28.1	192	181	167	88
24.0	92	87	80	23.4	290	273	252	96	61	58	54	28.6	193	182	168	89
24.5	89	84	77	23.8	291	274	254	96	59	56	52	29.1	194	183	169	89
25.0	86	81	75	24.2	293	276	255	96	57	54	50	29.6	195	184	170	89
25.5	83	78	72	24.6	295	277	256	96	55	52	48	30.1	196	185	171	89
26.0	80	76	70	25.0	296	279	258	96	54	50	47	30.7	197	186	172	89
26.5	78	73	68	25.4	298	280	259	96	52	49	45	31.2	198	187	173	89
27.0	75	71	65	25.9	299	282	260	96	50	47	44	31.7	199	188	174	89
27.5	73	69	63	26.3	301	283	262	96	49	46	42	32.2	200	189	174	89
28.0	71	67	61	26.7	302	284	263	97	47	44	41	32.7	201	190	175	89
28.5	69	65	60	27.1	304	286	264	97	46	43	40	33.2	202	191	176	89
29.0	66	63	58	27.5	305	287	265	97	44	42	39	33.7	203	191	177	89
30.0	63	59	55	28.3	308	290	268	97	42	39	36	34.7	205	193	179	90

Column headings are:

QMD Quadratic mean diameter (the diameter of the tree of average basal area).

EA Even aged, showing the trees/acre, or basal area/acre, associated with an even-aged stand structure.

IS Irregular structure; even-aged SDIs were reduced by 6% for an irregular stand structure (from Long 1995).

UA Uneven aged; even-aged SDIs were reduced by 13% for an uneven-aged stand structure (from Long 1995).

ES Equilateral spacing, in feet, that the trees per acre associated with an even-aged stand structure (EA columns) would have when spaced equilaterally apart; also referred to as triangular spacing.

CC Canopy cover; based on the "CW" equation from Dealy (1985) and the basal area per acre for an irregular structure (IS columns).