Appendix V. Yield Curves

Yield curves have been developed for commercially important forest stands. The stand mean merchantable volume per hectare was regressed over FLI age using a 2-parameter model.

Tree level merchantable volume is aggregated into plot level merchantable volume. The three plots per polygon (forest stand) are then averaged to produce mean merchantable volume of the stand. All stands underwent stratification into groups similar in species composition, density and productivity. Yield curves were developed, estimating total merchantable softwood and hardwood volume over stand age for tree length utilization standards and log length utilization standards.

The maximum age class present in the mountain forest section varies with strata, but seldom exceeds 150 years. The volume sampling plots, with the exception of those plots falling within the black spruce stratum, rarely encountered softwood stands older than 150 years and hardwood stands older than 120 years. For most strata types, the distribution of area, among age class, is a normal one with the greater area concentrated at maturity. For some strata the frequent number of plots found around rotation age and/or low number of plots at older age classes often caused the trajectory of the growth model to unnaturally increase in merchantable volume, beyond the limits of the data and well past stand breakup age.

Tree Length Yield Curves

Step one involved the development of a total volume yield curve using tree length (stump height to top diameter). There were no log length restrictions beyond the initial merchantable length of 2.54m. If the regression work resulted in a non declining yield curve over the 200 year planning horizon a dummy observation was inserted into the data set at age 200 years. The magnitude and placement of these observations achieved the effect of drawing down the total merchantable volume curve through the older age classes without significantly effecting the position and slope of the original curve with the range of existing data. In total, 11 of the 20 total tree length volume curves were influenced by dummy observations. The process used to assign the value to the dummy observation was primarily trial and error using the following guidelines:

- Cause little change to the curves original slope through valid sampling data.
- Cause a negative slope to begin on the curve near or beyond the breakup age or near/beyond the extent of the data

Merchantable Log Length Yield Curves

A second yield curve was developed incorporating minimum merchantable log-lengths of 2.54 meters. The added merchantable volume constraint (log length) resulted in lower unit volumes/ha and greater variability, compromising the expected relationship of this curve to total tree length volume in follow up regression analysis. In some age classes the minimum merchantable log-length yield curve produced volume estimates greater than the less constrained tree length curve, particularly at older age classes. To correct this anomaly, dummy variables were again used but their placement and magnitude were determined as follows.

The function of the dummy variables is to draw down the log length curve and improve relative positioning along the length of the tree length total volume curve. To do this the % loss in volume moving from a tree length utilization standard to a minimum merchantable log-length standard was calculated from the data. This loss varied with age class so the mean % loss in vol/ha was determined between the ages of 50 and 120 years or likely age range that harvesting would take place. The dummy variables were then inserted into the log-length data base at age 190, 195 and 200 years. The magnitude of each dummy variable was determined by reducing the corresponding age class's tree length volume estimate by the calculated mean % loss and then assigning the result of this calculation to the corresponding log-length curve dummy variable. The log-length regression analysis was then re-run including the dummy variables to produce the total merchantable, log length yield curve. Adjustments to log-length curves were generally minor in scope and outside the general range of operating age.

Outliers and Influential Observations

Variability in strata's merchantable volumes at a given age are to be expected. Nevertheless, it is important that some natural growth pattern can be reflected in the data assigned to strata. Since yield curves are applied to an aggregation of stand types (strata) the stand is considered the ecological unit. The three plots located within the stand type are averaged to provide the mean volume/ha of the stand. The aggregation of sampled stands under a strata label provides the volume/ha data for the development of strata yield curves. The stand averaging process assists in mitigating the effects of outlying observations, minimizing the removal of data. In this relatively small data set, it was generally felt that outliers may legitimately represent the high degree of variability in unit volumes exhibited by some strata. However, in some strata, these outliers made it difficult to achieve convergence in the regression analysis. In such cases, the outlier was examined to see if removal of the observation permitted convergence in the regression analysis.

Outliers (outside 3 standard deviations) were considered for removal when:

A) convergence could not be achieved using SAS PROC NLIN procedure
B) the curve was significantly influenced by the outlier(s) largely due to a lack of observations.

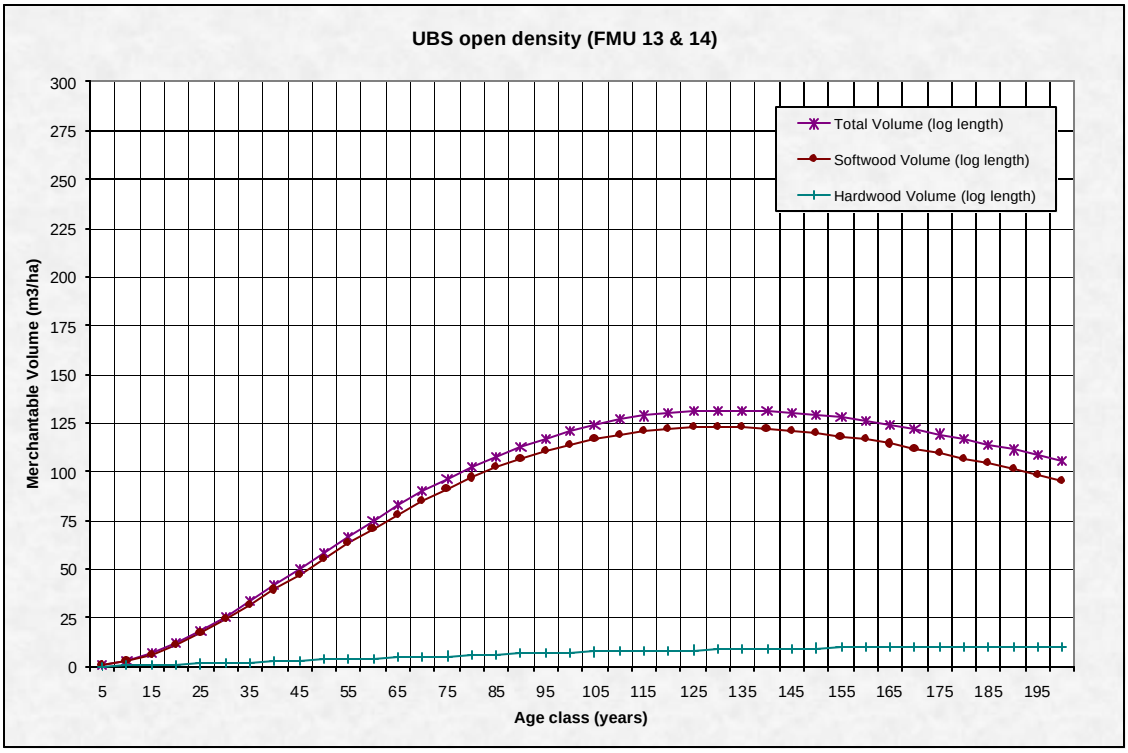
In total, 7 plots were removed from 6 stands, effecting 4 strata.

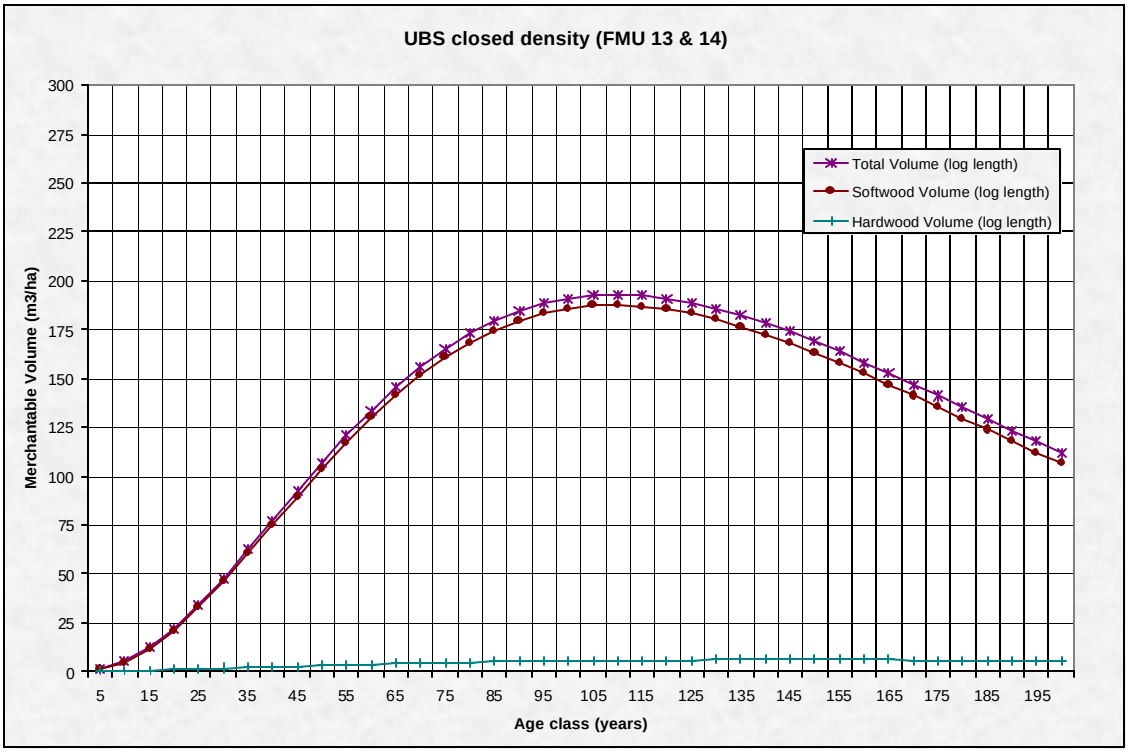
Wood supply analysts should be aware that the volume estimates for strata in this analysis go beyond the range of the data and the estimates at older ages should be carefully considered.

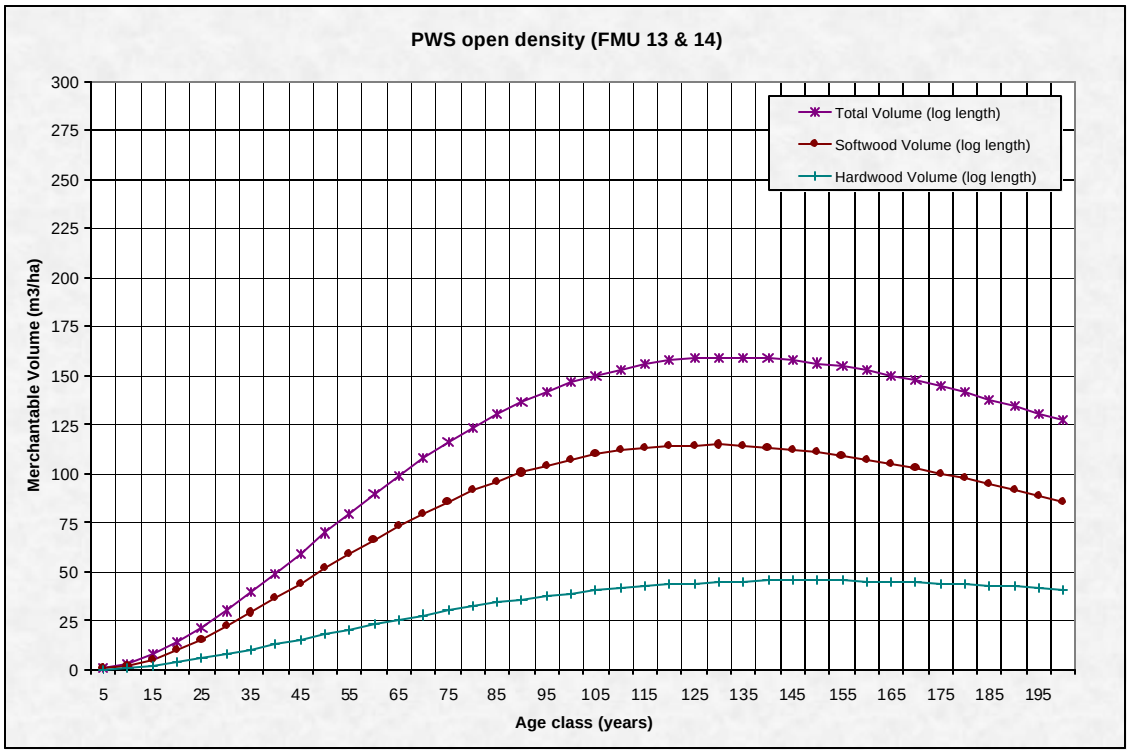
The graphs and tables shown in this appendix are log length graphs used to determine the "Base Case". Supporting data includes log length and tree length information in tabular form. MBS yield curve is a composite curve which includes both MBS and NBS strata.

In the following graphs, open density and closed density refer to Density Class 1 and 2 respectively. In the tables, the Density Class A is defined as all density; C, closed same as Density Class 2; O, Open same as Density Class 1.

Log Length Yield Graphs for FMU 13 And 14






PWS open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)
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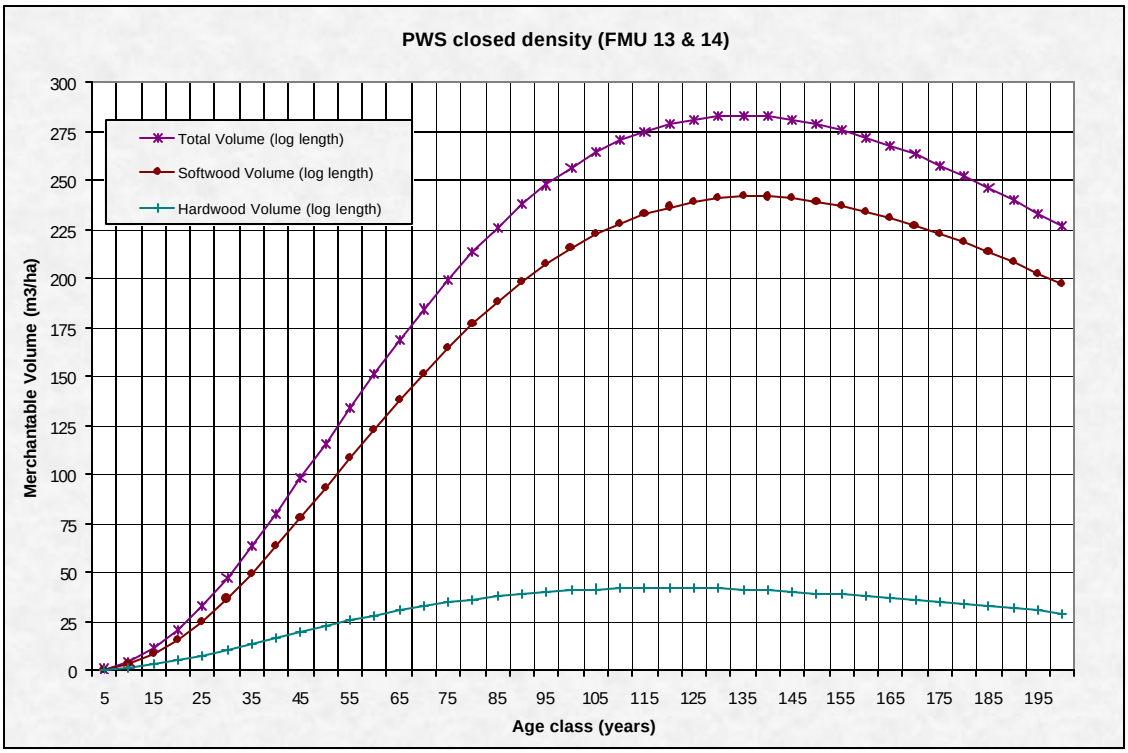
PWS closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
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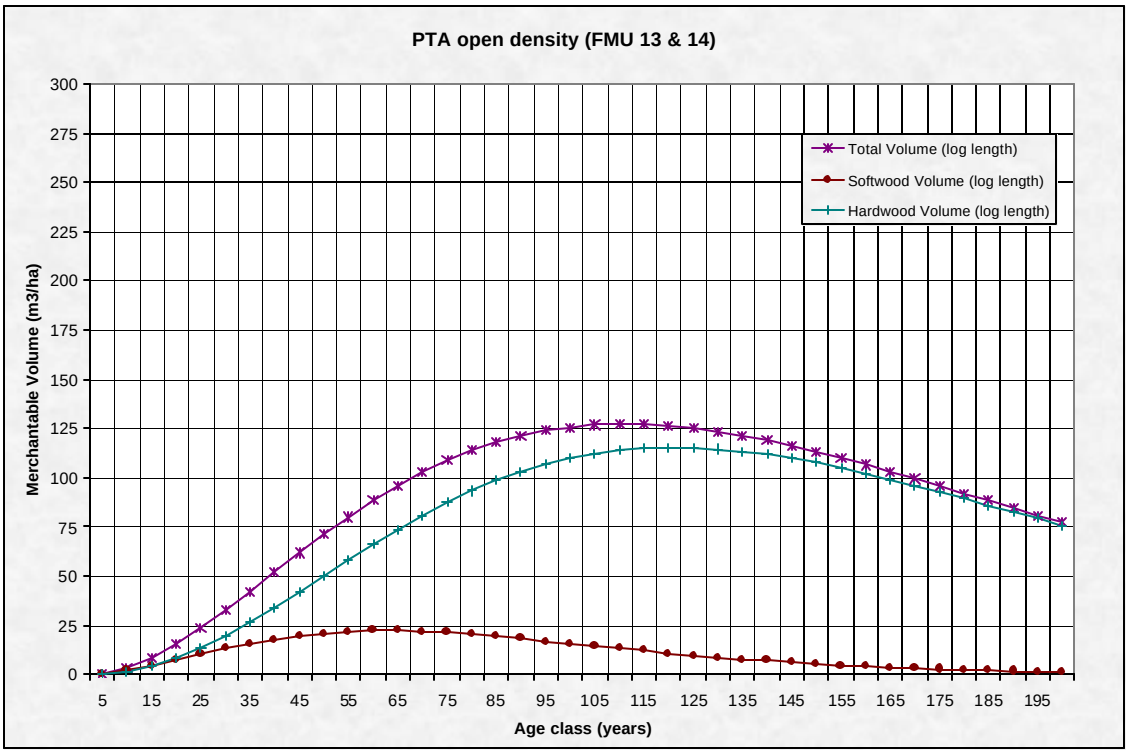
PTA open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
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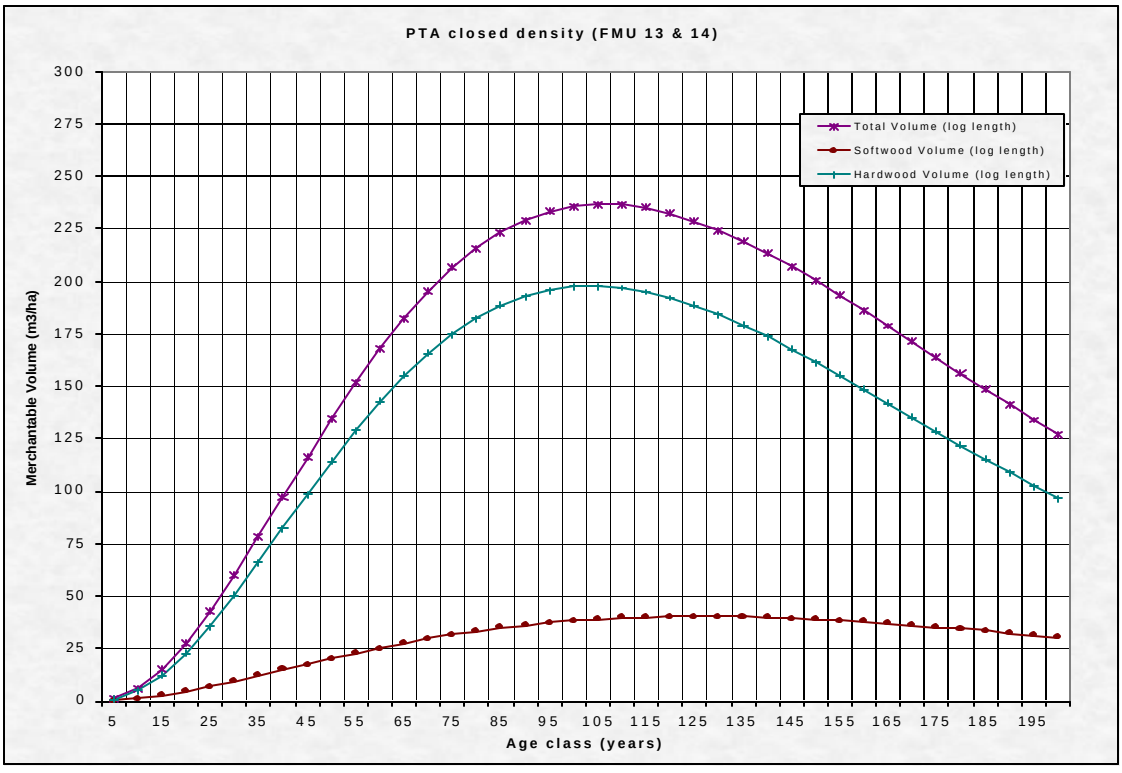
PTA closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
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Hardwood Volume (log length)
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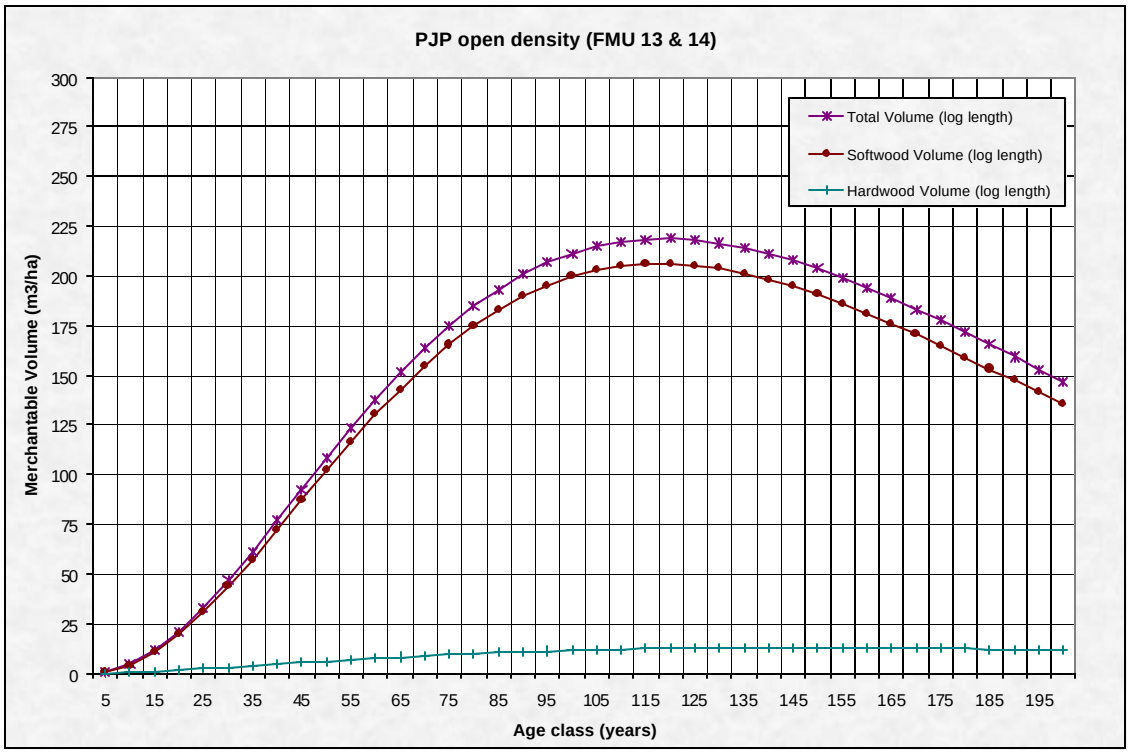
PJP open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
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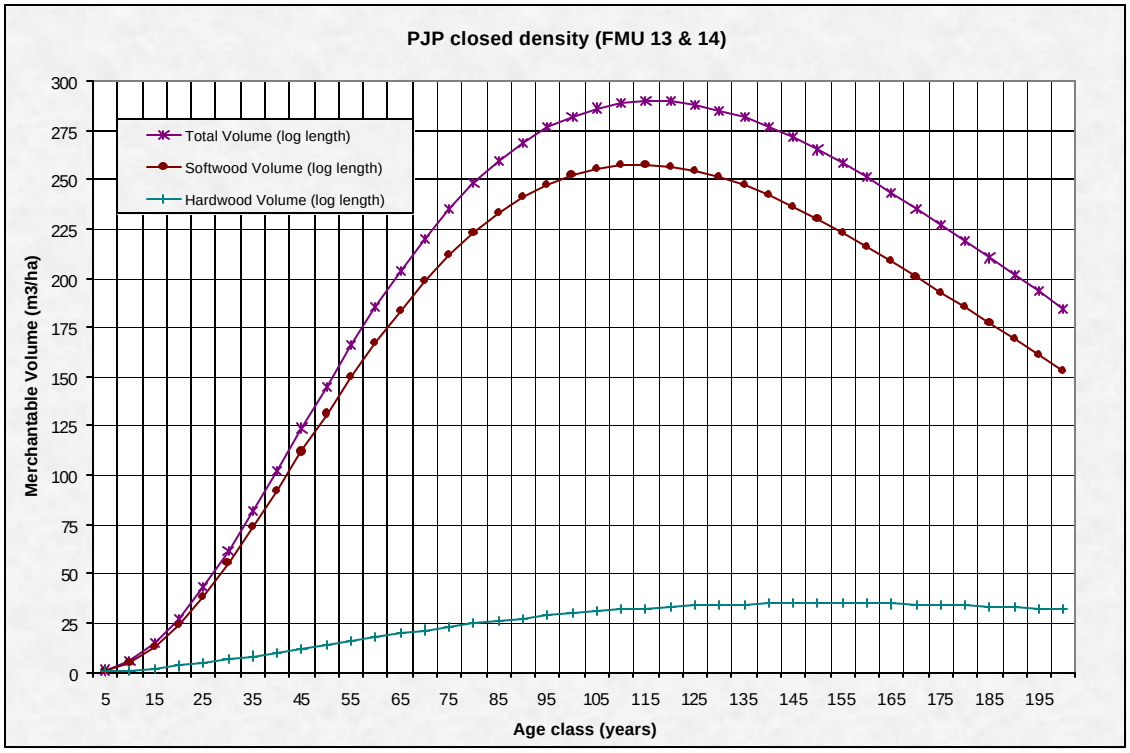
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Merchantable Volume (m3/ha)
Age class (years)
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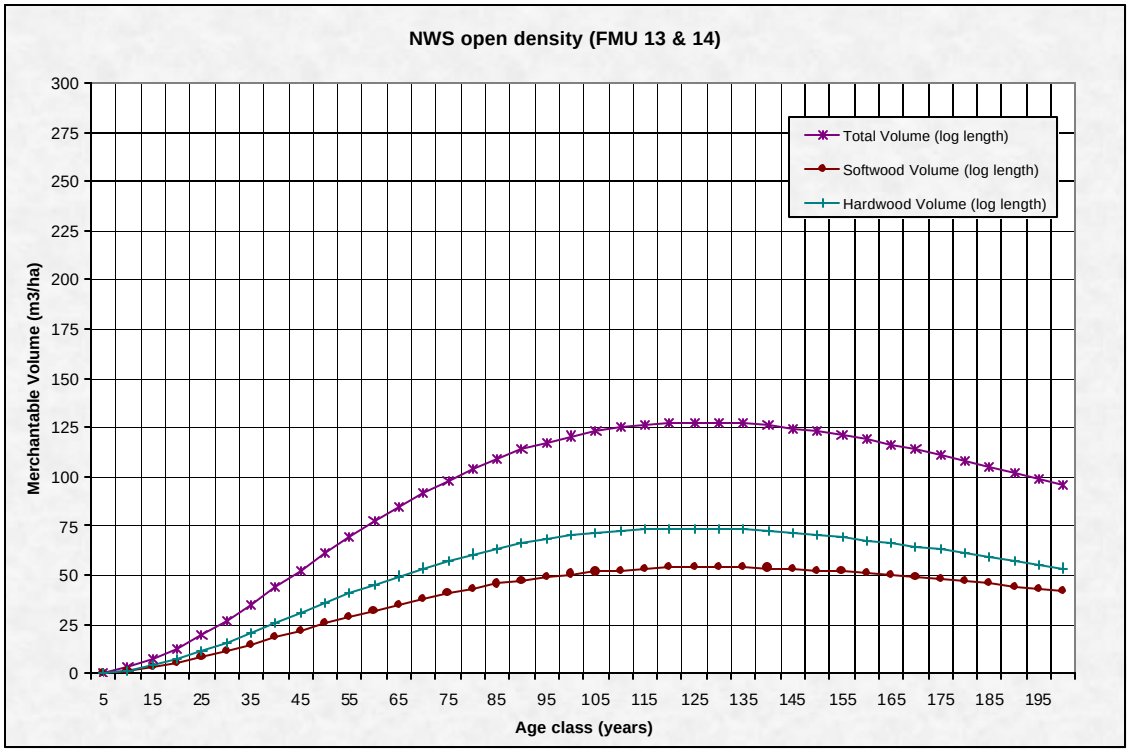
NWS open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)
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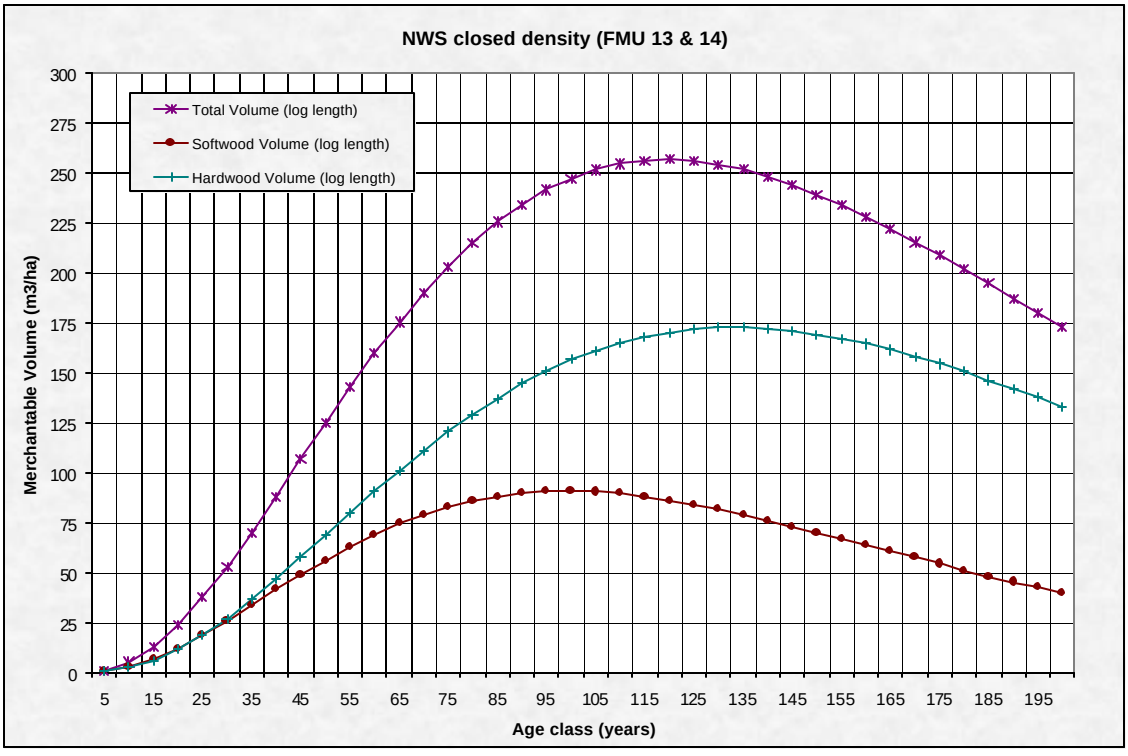
NWS closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
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Hardwood Volume (log length)
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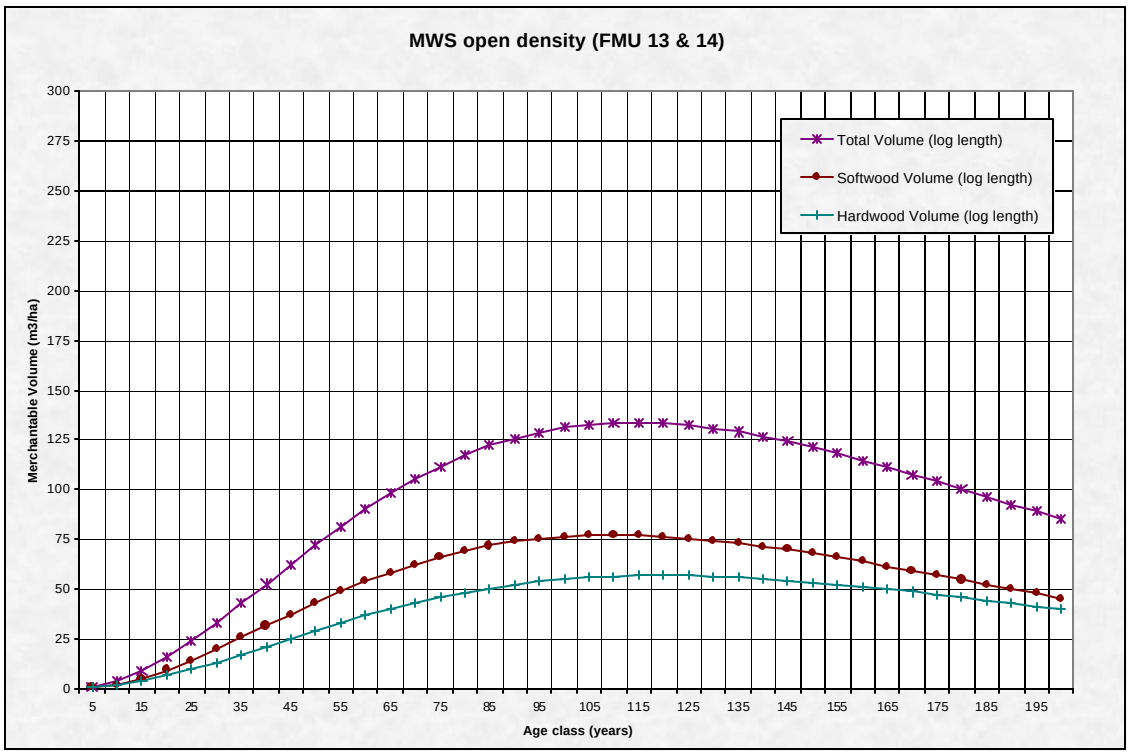
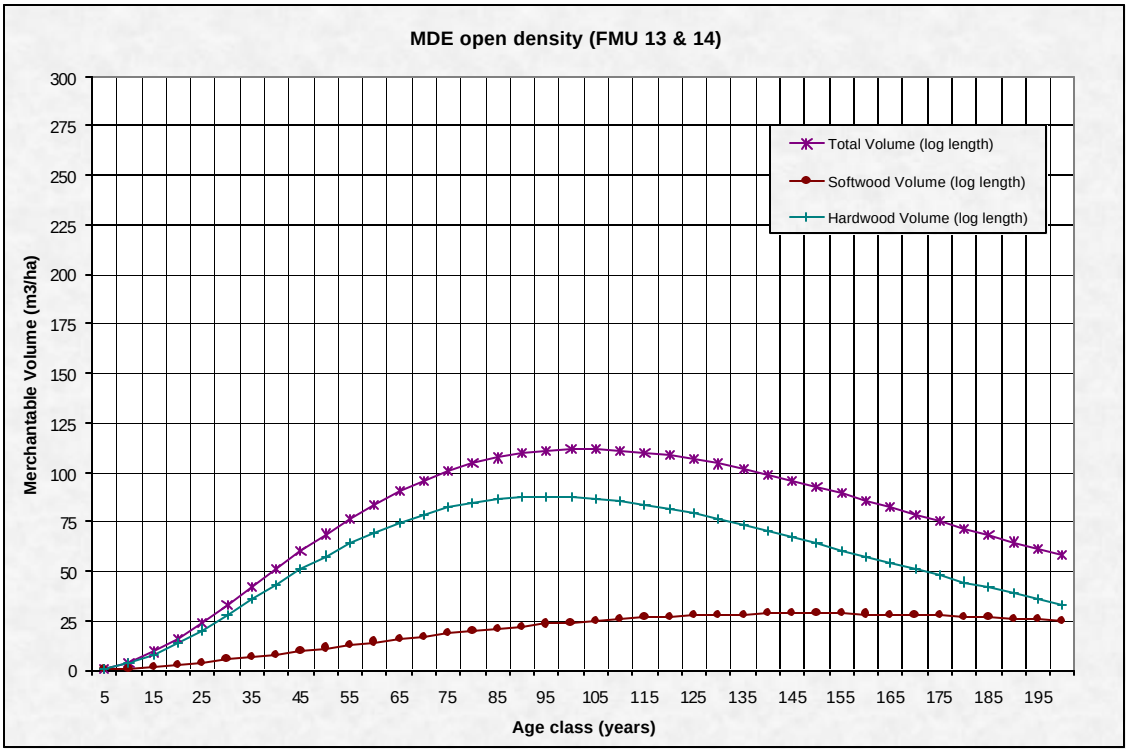

MWS open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)


MWS closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)


MDE open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)
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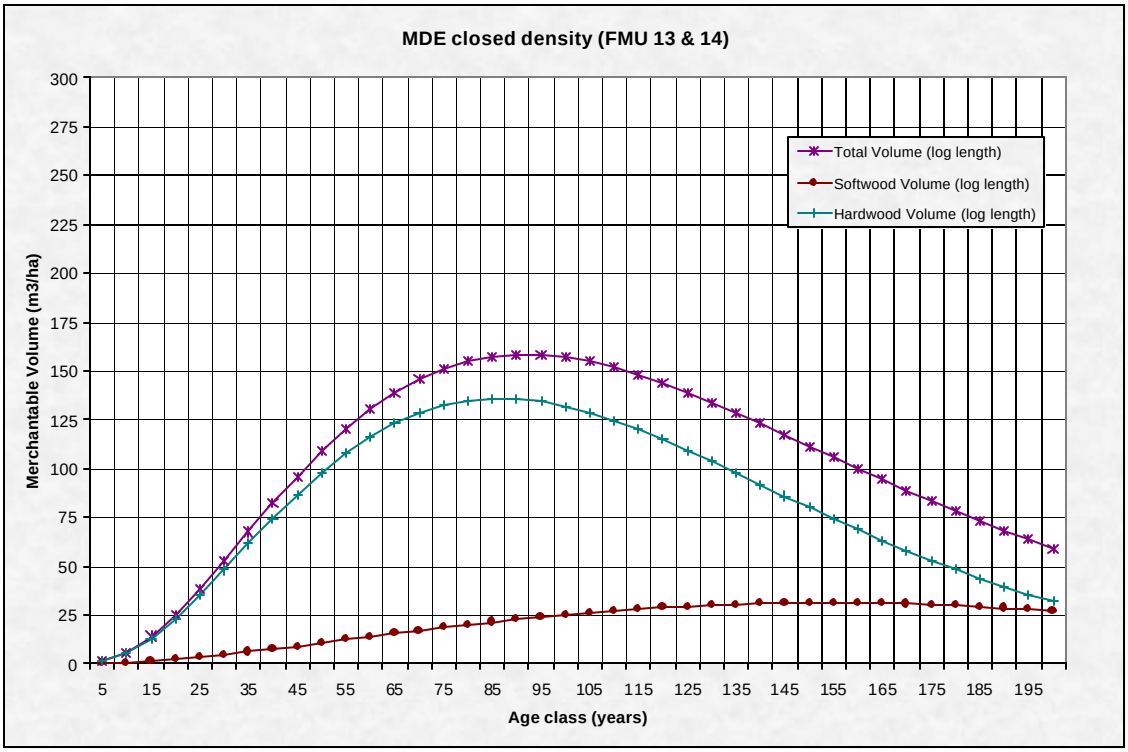
MDE closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
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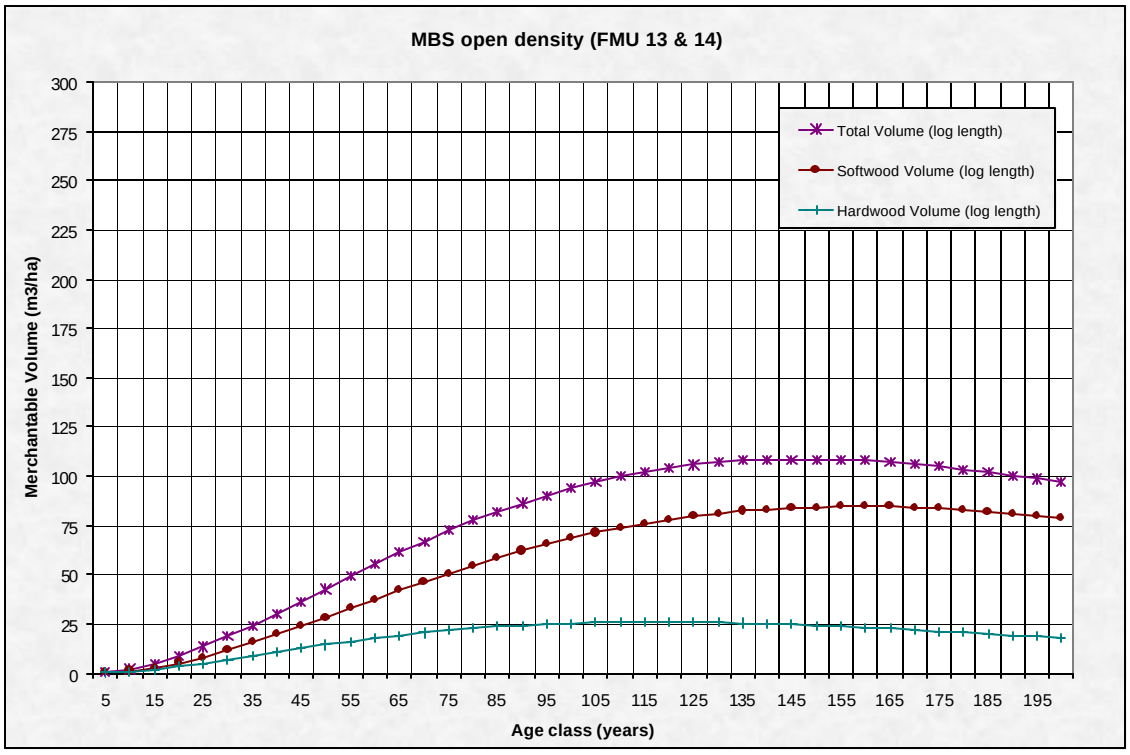
MBS open density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
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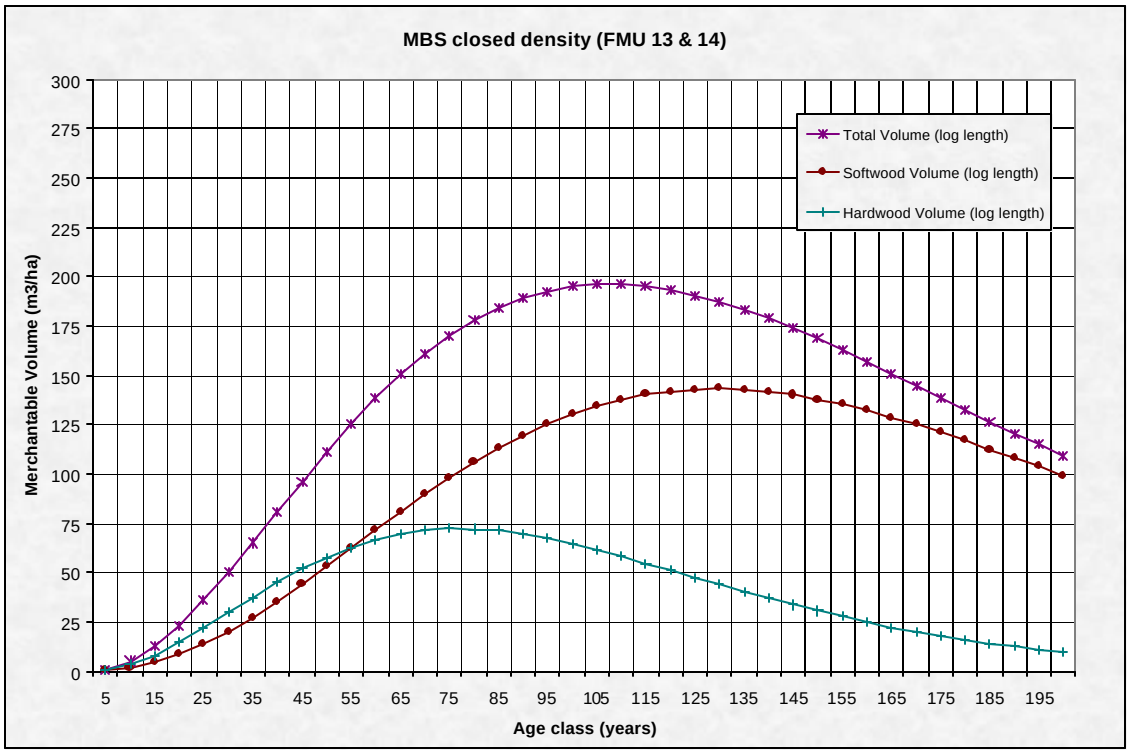
MBS closed density (FMU 13 & 14)
Merchantable Volume (m3/ha)
Age class (years)
Total Volume (log length)
Softwood Volume (log length)
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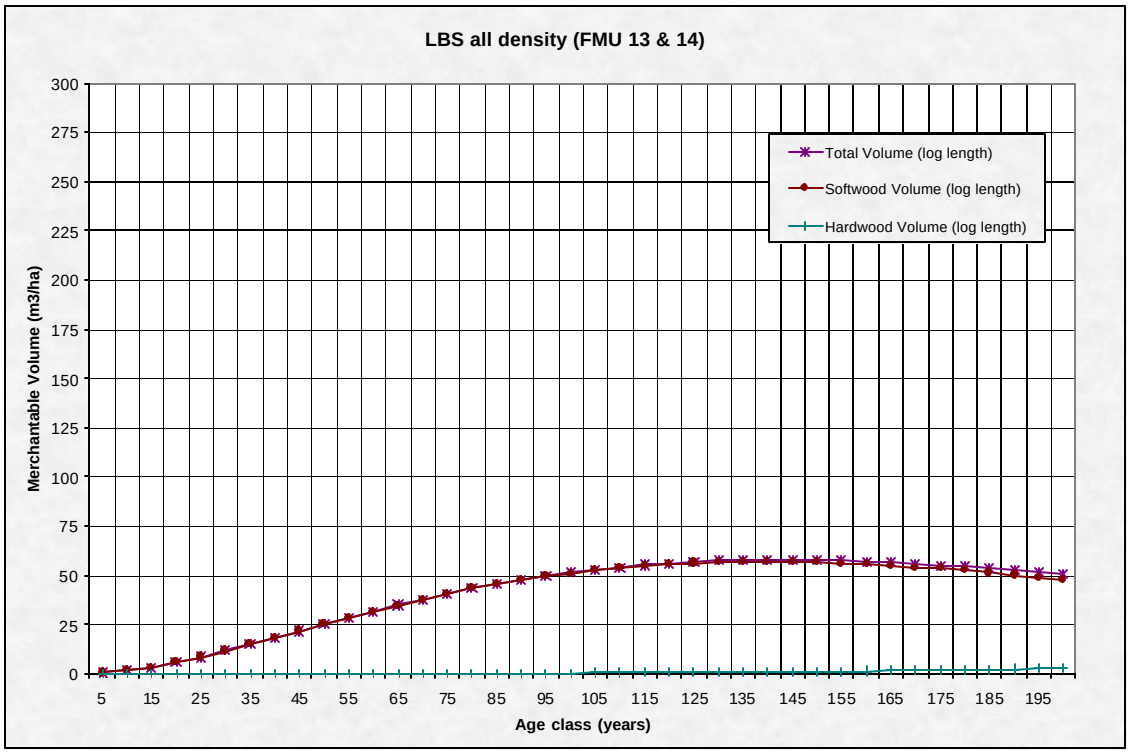
LBS all density (FMU 13 & 14)
Merchantable Volume (m3/ha)
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Age class (years)
Total Volume (log length)
Softwood Volume (log length)
Hardwood Volume (log length)

Log Length Yield Table for FMU 13 And 14

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	ADJUSTED CONIFER M3/HA	ADJUSTED DECIDUOUS M3/HA
LBS	A	1	5	0.395	0.401	0.000	0.395	0.000
LBS	A	2	10	1.564	1.582	0.000	1.563	0.000
LBS	A	3	15	3.392	3.424	0.001	3.391	0.001
LBS	A	4	20	5.752	5.794	0.002	5.750	0.001
LBS	A	5	25	8.522	8.569	0.003	8.519	0.003
LBS	A	6	30	11.594	11.637	0.006	11.589	0.006
LBS	A	7	35	14.871	14.899	0.009	14.862	0.009
LBS	A	8	40	18.269	18.273	0.015	18.255	0.014
LBS	A	9	45	21.717	21.685	0.021	21.695	0.021
LBS	A	10	50	25.153	25.074	0.030	25.123	0.030
LBS	A	11	55	28.527	28.391	0.041	28.486	0.041
LBS	A	12	60	31.797	31.595	0.055	31.742	0.055
LBS	A	13	65	34.929	34.651	0.071	34.857	0.072
LBS	A	14	70	37.896	37.536	0.091	37.805	0.091
LBS	A	15	75	40.678	40.228	0.114	40.564	0.115
LBS	A	16	80	43.260	42.714	0.140	43.118	0.142
LBS	A	17	85	45.630	44.984	0.171	45.457	0.173
LBS	A	18	90	47.782	47.033	0.206	47.574	0.209
LBS	A	19	95	49.714	48.859	0.246	49.465	0.249
LBS	A	20	100	51.425	50.463	0.291	51.130	0.295
LBS	A	21	105	52.917	51.847	0.342	52.570	0.346
LBS	A	22	110	54.194	53.018	0.398	53.790	0.404
LBS	A	23	115	55.262	53.981	0.460	54.795	0.467
LBS	A	24	120	56.130	54.744	0.529	55.592	0.537
LBS	A	25	125	56.804	55.318	0.605	56.189	0.614
LBS	A	26	130	57.293	55.711	0.687	56.595	0.698
LBS	A	27	135	57.609	55.933	0.778	56.819	0.790
LBS	A	28	140	57.760	55.995	0.876	56.870	0.890
LBS	A	29	145	57.757	55.908	0.983	56.760	0.998
LBS	A	30	150	57.611	55.683	1.098	56.497	1.114
LBS	A	31	155	57.332	55.330	1.223	56.092	1.240
LBS	A	32	160	56.930	54.860	1.357	55.556	1.374
LBS	A	33	165	56.415	54.283	1.500	54.898	1.517
LBS	A	34	170	55.798	53.609	1.654	54.128	1.670
LBS	A	35	175	55.088	52.848	1.819	53.255	1.833
LBS	A	36	180	54.294	52.009	1.995	52.288	2.006
LBS	A	37	185	53.425	51.100	2.182	51.237	2.188
LBS	A	38	190	52.490	50.131	2.381	50.110	2.380
LBS	A	39	195	51.496	49.109	2.592	48.914	2.582
LBS	A	40	200	50.452	48.042	2.816	47.658	2.794
MBS	C	1	5	1.074	0.686	1.353	0.361	0.713
MBS	C	2	10	5.279	3.120	5.938	1.818	3.460
MBS	C	3	15	12.775	7.293	13.127	4.563	8.212
MBS	C	4	20	23.134	12.976	21.912	8.604	14.530
MBS	C	5	25	35.738	19.881	31.361	13.866	21.873
MBS	C	6	30	49.931	27.713	40.723	20.220	29.711
MBS	C	7	35	65.084	36.191	49.444	27.506	37.578
MBS	C	8	40	80.637	45.057	57.152	35.547	45.090
MBS	C	9	45	96.107	54.086	63.629	44.158	51.949
MBS	C	10	50	111.094	63.083	68.772	53.150	57.944
MBS	C	11	55	125.280	71.883	72.570	62.342	62.938
MBS	C	12	60	138.419	80.351	75.079	71.557	66.862
MBS	C	13	65	150.335	88.379	76.394	80.635	69.700
MBS	C	14	70	160.909	95.881	76.640	89.427	71.481
MBS	C	15	75	170.070	102.795	75.955	97.804	72.267
MBS	C	16	80	177.792	109.077	74.481	105.651	72.142
MBS	C	17	85	184.083	114.698	72.357	112.875	71.208
MBS	C	18	90	188.977	119.644	69.715	119.402	69.575
MBS	C	19	95	192.529	123.912	66.677	125.174	67.356
MBS	C	20	100	194.814	127.512	63.351	130.151	64.662

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	ADJUSTED CONIFER M3/HA	ADJUSTED DECIDUOUS M3/HA
MBS	C	21	105	195.914	130.457	59.832	134.313	61.601
MBS	C	22	110	195.922	132.770	56.204	137.652	58.271
MBS	C	23	115	194.935	134.478	52.536	140.174	54.761
MBS	C	24	120	193.052	135.613	48.887	141.899	51.153
MBS	C	25	125	190.371	136.208	45.302	142.857	47.514
MBS	C	26	130	186.988	136.299	41.821	143.084	43.903
MBS	C	27	135	182.997	135.923	38.471	142.628	40.369
MBS	C	28	140	178.487	135.118	35.274	141.537	36.950
MBS	C	29	145	173.542	133.921	32.245	139.866	33.676
MBS	C	30	150	168.240	132.369	29.392	137.671	30.569
MBS	C	31	155	162.655	130.499	26.720	135.011	27.644
MBS	C	32	160	156.852	128.345	24.232	131.942	24.910
MBS	C	33	165	150.893	125.942	21.923	128.521	22.372
MBS	C	34	170	144.832	123.321	19.792	124.803	20.030
MBS	C	35	175	138.719	120.513	17.830	120.840	17.879
MBS	C	36	180	132.597	117.546	16.032	116.683	15.915
MBS	C	37	185	126.505	114.447	14.389	112.376	14.129
MBS	C	38	190	120.475	111.242	12.892	107.963	12.512
MBS	C	39	195	114.538	107.952	11.531	103.484	11.054
MBS	C	40	200	108.716	104.601	10.298	98.973	9.744
MBS	O	1	5	0.504	0.394	0.363	0.262	0.242
MBS	O	2	10	2.184	1.626	1.294	1.216	0.968
MBS	O	3	15	4.991	3.628	2.625	2.896	2.095
MBS	O	4	20	8.776	6.287	4.231	5.246	3.531
MBS	O	5	25	13.368	9.488	6.012	8.183	5.185
MBS	O	6	30	18.595	13.119	7.887	11.613	6.982
MBS	O	7	35	24.293	17.077	9.792	15.440	8.853
MBS	O	8	40	30.315	21.267	11.677	19.570	10.745
MBS	O	9	45	36.526	25.606	13.503	23.915	12.611
MBS	O	10	50	42.810	30.021	15.239	28.396	14.414
MBS	O	11	55	49.066	34.447	16.864	32.940	16.126
MBS	O	12	60	55.207	38.828	18.362	37.482	17.725
MBS	O	13	65	61.161	43.117	19.722	41.965	19.195
MBS	O	14	70	66.868	47.275	20.939	46.342	20.526
MBS	O	15	75	72.280	51.269	22.010	50.571	21.710
MBS	O	16	80	77.361	55.072	22.934	54.616	22.745
MBS	O	17	85	82.080	58.663	23.716	58.450	23.630
MBS	O	18	90	86.418	62.025	24.358	62.050	24.368
MBS	O	19	95	90.361	65.147	24.868	65.398	24.964
MBS	O	20	100	93.904	68.020	25.250	68.482	25.422
MBS	O	21	105	97.043	70.640	25.513	71.293	25.749
MBS	O	22	110	99.781	73.005	25.665	73.827	25.954
MBS	O	23	115	102.126	75.115	25.714	76.082	26.045
MBS	O	24	120	104.087	76.974	25.667	78.059	26.029
MBS	O	25	125	105.677	78.585	25.534	79.761	25.916
MBS	O	26	130	106.909	79.955	25.322	81.194	25.714
MBS	O	27	135	107.799	81.091	25.039	82.367	25.433
MBS	O	28	140	108.366	82.002	24.693	83.286	25.080
MBS	O	29	145	108.627	82.697	24.291	83.964	24.663
MBS	O	30	150	108.600	83.184	23.840	84.409	24.191
MBS	O	31	155	108.305	83.476	23.347	84.635	23.671
MBS	O	32	160	107.761	83.582	22.817	84.652	23.109
MBS	O	33	165	106.987	83.513	22.257	84.474	22.513
MBS	O	34	170	106.002	83.280	21.671	84.113	21.888
MBS	O	35	175	104.824	82.893	21.066	83.583	21.241
MBS	O	36	180	103.470	82.364	20.444	82.894	20.576
MBS	O	37	185	101.959	81.703	19.811	82.061	19.898
MBS	O	38	190	100.307	80.921	19.171	81.095	19.212
MBS	O	39	195	98.529	80.027	18.525	80.008	18.521
MBS	O	40	200	96.641	79.032	17.879	78.812	17.829
MDE	C	1	5	1.246	0.202	1.258	0.172	1.074
MDE	C	2	10	6.024	0.727	5.959	0.655	5.369

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	ADJUSTED CONIFER M3/HA	ADJUSTED DECIDUOUS M3/HA
MDE	C	3	15	14.319	1.508	13.960	1.396	12.924
MDE	C	4	20	25.454	2.495	24.516	2.351	23.103
MDE	C	5	25	38.586	3.647	36.763	3.482	35.104
MDE	C	6	30	52.891	4.930	49.886	4.757	48.134
MDE	C	7	35	67.631	6.313	63.184	6.144	61.487
MDE	C	8	40	82.190	7.772	76.088	7.617	74.572
MDE	C	9	45	96.076	9.283	88.163	9.152	86.924
MDE	C	10	50	108.919	10.826	99.096	10.727	98.192
MDE	C	11	55	120.455	12.385	108.677	12.322	108.132
MDE	C	12	60	130.513	13.944	116.789	13.921	116.592
MDE	C	13	65	139.000	15.491	123.384	15.505	123.495
MDE	C	14	70	145.888	17.016	128.472	17.062	128.825
MDE	C	15	75	151.197	18.507	132.105	18.579	132.617
MDE	C	16	80	154.986	19.959	134.368	20.044	134.942
MDE	C	17	85	157.344	21.363	135.367	21.446	135.898
MDE	C	18	90	158.378	22.714	135.221	22.777	135.600
MDE	C	19	95	158.207	24.008	134.058	24.029	134.178
MDE	C	20	100	156.959	25.241	132.005	25.195	131.764
MDE	C	21	105	154.761	26.410	129.190	26.268	128.494
MDE	C	22	110	151.743	27.513	125.734	27.243	124.500
MDE	C	23	115	148.026	28.549	121.753	28.116	119.909
MDE	C	24	120	143.727	29.516	117.353	28.885	114.843
MDE	C	25	125	138.957	30.415	112.632	29.545	109.412
MDE	C	26	130	133.815	31.245	107.678	30.096	103.719
MDE	C	27	135	128.394	32.006	102.570	30.536	97.858
MDE	C	28	140	122.775	32.700	97.377	30.865	91.911
MDE	C	29	145	117.034	33.328	92.158	31.083	85.951
MDE	C	30	150	111.234	33.889	86.965	31.192	80.042
MDE	C	31	155	105.432	34.387	81.842	31.193	74.239
MDE	C	32	160	99.676	34.823	76.824	31.089	68.587
MDE	C	33	165	94.008	35.198	71.942	30.884	63.124
MDE	C	34	170	88.461	35.514	67.219	30.580	57.880
MDE	C	35	175	83.064	35.774	62.673	30.184	52.880
MDE	C	36	180	77.839	35.980	58.318	29.700	48.139
MDE	C	37	185	72.804	36.133	54.163	29.133	43.671
MDE	C	38	190	67.972	36.236	50.215	28.491	39.482
MDE	C	39	195	63.353	36.290	46.475	27.779	35.574
MDE	C	40	200	58.951	36.299	42.944	27.004	31.947
MDE	O	1	5	0.874	0.236	0.885	0.184	0.690
MDE	O	2	10	3.947	0.838	3.874	0.702	3.245
MDE	O	3	15	9.094	1.715	8.731	1.493	7.601
MDE	O	4	20	15.909	2.804	14.998	2.506	13.403
MDE	O	5	25	23.930	4.052	22.200	3.694	20.237
MDE	O	6	30	32.719	5.417	29.909	5.017	27.702
MDE	O	7	35	41.883	6.862	37.761	6.441	35.442
MDE	O	8	40	51.090	8.358	45.460	7.934	43.155
MDE	O	9	45	60.067	9.878	52.777	9.470	50.597
MDE	O	10	50	68.599	11.400	59.542	11.024	57.576
MDE	O	11	55	76.524	12.907	65.635	12.576	63.948
MDE	O	12	60	83.723	14.384	70.980	14.107	69.616
MDE	O	13	65	90.119	15.817	75.536	15.603	74.516
MDE	O	14	70	95.666	17.197	79.293	17.050	78.616
MDE	O	15	75	100.347	18.516	82.261	18.437	81.910
MDE	O	16	80	104.167	19.767	84.468	19.754	84.413
MDE	O	17	85	107.146	20.945	85.954	20.994	86.153
MDE	O	18	90	109.321	22.048	86.771	22.149	87.172
MDE	O	19	95	110.737	23.071	86.973	23.217	87.521
MDE	O	20	100	111.446	24.015	86.620	24.191	87.255
MDE	O	21	105	111.505	24.878	85.772	25.070	86.435
MDE	O	22	110	110.973	25.660	84.488	25.852	85.120
MDE	O	23	115	109.910	26.363	82.828	26.537	83.374
MDE	O	24	120	108.378	26.988	80.847	27.123	81.254

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS ADJUSTED M3/HA
MDE	O	25	125	106.433	27.535	78.598	27.613	78.820
MDE	O	26	130	104.132	28.008	76.130	28.007	76.126
MDE	O	27	135	101.529	28.409	73.488	28.306	73.223
MDE	O	28	140	98.674	28.740	70.713	28.514	70.159
MDE	O	29	145	95.613	29.004	67.844	28.634	66.979
MDE	O	30	150	92.390	29.204	64.912	28.668	63.722
MDE	O	31	155	89.044	29.343	61.948	28.620	60.423
MDE	O	32	160	85.610	29.424	58.978	28.494	57.115
MDE	O	33	165	82.120	29.450	56.024	28.295	53.826
MDE	O	34	170	78.604	29.425	53.105	28.025	50.579
MDE	O	35	175	75.087	29.351	50.238	27.691	47.396
MDE	O	36	180	71.589	29.231	47.436	27.295	44.294
MDE	O	37	185	68.132	29.070	44.711	26.844	41.288
MDE	O	38	190	64.731	28.868	42.071	26.342	38.389
MDE	O	39	195	61.400	28.631	39.524	25.793	35.607
MDE	O	40	200	58.151	28.359	37.075	25.203	32.948
MWS	C	1	5	1.350	1.130	0.737	0.817	0.533
MWS	C	2	10	6.833	5.333	3.149	4.296	2.537
MWS	C	3	15	16.706	12.523	7.039	10.695	6.011
MWS	C	4	20	30.324	22.101	12.064	19.616	10.707
MWS	C	5	25	46.753	33.353	17.879	30.437	16.316
MWS	C	6	30	65.012	45.587	24.168	42.487	22.525
MWS	C	7	35	84.186	58.194	30.660	55.137	29.049
MWS	C	8	40	103.475	70.663	37.130	67.832	35.643
MWS	C	9	45	122.218	82.588	43.398	80.118	42.100
MWS	C	10	50	139.892	93.661	49.324	91.634	48.257
MWS	C	11	55	156.102	103.660	54.805	102.114	53.988
MWS	C	12	60	170.573	112.440	59.766	111.374	59.199
MWS	C	13	65	183.129	119.920	64.160	119.300	63.829
MWS	C	14	70	193.681	126.070	67.963	125.841	67.840
MWS	C	15	75	202.207	130.901	71.167	130.992	71.216
MWS	C	16	80	208.745	134.456	73.777	134.787	73.958
MWS	C	17	85	213.370	136.804	75.811	137.290	76.081
MWS	C	18	90	216.195	138.026	77.295	138.586	77.609
MWS	C	19	95	217.352	138.220	78.262	138.775	78.576
MWS	C	20	100	216.987	137.485	78.747	137.965	79.022
MWS	C	21	105	215.255	135.927	78.789	136.268	78.987
MWS	C	22	110	212.315	133.648	78.429	133.798	78.517
MWS	C	23	115	208.323	130.750	77.708	130.666	77.657
MWS	C	24	120	203.429	127.330	76.665	126.977	76.453
MWS	C	25	125	197.780	123.477	75.341	122.832	74.948
MWS	C	26	130	191.510	119.276	73.774	118.325	73.185
MWS	C	27	135	184.746	114.806	71.998	113.541	71.205
MWS	C	28	140	177.604	110.136	70.048	108.558	69.045
MWS	C	29	145	170.187	105.329	67.956	103.446	66.741
MWS	C	30	150	162.590	100.441	65.749	98.265	64.325
MWS	C	31	155	154.896	95.523	63.455	93.070	61.826
MWS	C	32	160	147.178	90.616	61.097	87.907	59.271
MWS	C	33	165	139.500	85.758	58.698	82.816	56.684
MWS	C	34	170	131.915	80.979	56.276	77.829	54.086
MWS	C	35	175	124.470	76.307	53.849	72.973	51.496
MWS	C	36	180	117.203	71.762	51.432	68.272	48.931
MWS	C	37	185	110.144	67.361	49.038	63.741	46.403
MWS	C	38	190	103.320	63.118	46.679	59.395	43.925
MWS	C	39	195	96.749	59.044	44.363	55.242	41.507
MWS	C	40	200	90.445	55.144	42.101	51.288	39.157
MWS	O	1	5	0.816	0.652	0.490	0.466	0.350
MWS	O	2	10	3.753	2.756	1.957	2.195	1.558
MWS	O	3	15	8.777	6.139	4.244	5.189	3.588
MWS	O	4	20	15.563	10.524	7.167	9.259	6.305
MWS	O	5	25	23.714	15.631	10.551	14.157	9.557
MWS	O	6	30	32.828	21.201	14.244	19.636	13.192

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS ADJUSTED M3/HA
MWS	O	7	35	42.535	27.009	18.111	25.462	17.073
MWS	O	8	40	52.506	32.867	22.041	31.429	21.077
MWS	O	9	45	62.460	38.618	25.941	37.363	25.097
MWS	O	10	50	72.163	44.140	29.735	43.117	29.046
MWS	O	11	55	81.428	49.336	33.365	48.577	32.851
MWS	O	12	60	90.108	54.136	36.783	53.653	36.455
MWS	O	13	65	98.095	58.489	39.955	58.282	39.813
MWS	O	14	70	105.310	62.363	42.856	62.417	42.893
MWS	O	15	75	111.706	65.742	45.472	66.033	45.673
MWS	O	16	80	117.256	68.622	47.793	69.118	48.138
MWS	O	17	85	121.956	71.006	49.816	71.673	50.283
MWS	O	18	90	125.815	72.909	51.543	73.707	52.108
MWS	O	19	95	128.857	74.351	52.982	75.241	53.616
MWS	O	20	100	131.115	75.354	54.140	76.297	54.818
MWS	O	21	105	132.631	75.948	55.030	76.906	55.725
MWS	O	22	110	133.450	76.160	55.666	77.098	56.352
MWS	O	23	115	133.623	76.023	56.062	76.908	56.715
MWS	O	24	120	133.203	75.567	56.235	76.371	56.833
MWS	O	25	125	132.244	74.824	56.200	75.521	56.723
MWS	O	26	130	130.798	73.825	55.974	74.393	56.405
MWS	O	27	135	128.919	72.600	55.574	73.022	55.897
MWS	O	28	140	126.658	71.178	55.016	71.440	55.218
MWS	O	29	145	124.064	69.586	54.316	69.677	54.387
MWS	O	30	150	121.183	67.850	53.490	67.762	53.421
MWS	O	31	155	118.061	65.994	52.552	65.724	52.337
MWS	O	32	160	114.739	64.040	51.516	63.587	51.152
MWS	O	33	165	111.254	62.009	50.397	61.374	49.880
MWS	O	34	170	107.642	59.920	49.205	59.106	48.536
MWS	O	35	175	103.936	57.790	47.953	56.802	47.134
MWS	O	36	180	100.165	55.634	46.652	54.481	45.684
MWS	O	37	185	96.356	53.468	45.312	52.156	44.200
MWS	O	38	190	92.533	51.302	43.942	49.842	42.691
MWS	O	39	195	88.717	49.148	42.551	47.550	41.167
MWS	O	40	200	84.928	47.015	41.146	45.291	39.637
NWS	C	1	5	1.041	0.858	0.708	0.570	0.470
NWS	C	2	10	5.270	3.767	3.317	2.802	2.468
NWS	C	3	15	13.029	8.521	7.898	6.762	6.267
NWS	C	4	20	24.023	14.693	14.248	12.196	11.827
NWS	C	5	25	37.716	21.833	22.081	18.751	18.964
NWS	C	6	30	53.486	29.530	31.085	26.057	27.429
NWS	C	7	35	70.710	37.429	40.952	33.766	36.944
NWS	C	8	40	88.801	45.239	51.393	41.573	47.228
NWS	C	9	45	107.229	52.730	62.149	49.219	58.010
NWS	C	10	50	125.535	59.727	72.989	56.495	69.040
NWS	C	11	55	143.333	66.103	83.716	63.241	80.092
NWS	C	12	60	160.305	71.773	94.160	69.339	90.967
NWS	C	13	65	176.202	76.688	104.185	74.708	101.494
NWS	C	14	70	190.832	80.827	113.677	79.301	111.531
NWS	C	15	75	204.060	84.190	122.549	83.099	120.961
NWS	C	16	80	215.798	86.797	130.735	86.105	129.692
NWS	C	17	85	225.996	88.682	138.188	88.340	137.655
NWS	C	18	90	234.641	89.887	144.879	89.839	144.802
NWS	C	19	95	241.747	90.461	150.793	90.646	151.101
NWS	C	20	100	247.354	90.459	155.926	90.815	156.540
NWS	C	21	105	251.518	89.936	160.286	90.402	161.116
NWS	C	22	110	254.309	88.949	163.890	89.467	164.843
NWS	C	23	115	255.810	87.556	166.761	88.070	167.740
NWS	C	24	120	256.110	85.808	168.928	86.271	169.839
NWS	C	25	125	255.302	83.760	170.424	84.128	171.174
NWS	C	26	130	253.484	81.459	171.287	81.697	171.787
NWS	C	27	135	250.752	78.952	171.555	79.029	171.723
NWS	C	28	140	247.203	76.280	171.268	76.174	171.029

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	ADJUSTED CONIFER M3/HA	ADJUSTED DECIDUOUS M3/HA
NWS	C	29	145	242.930	73.482	170.470	73.175	169.756
NWS	C	30	150	238.025	70.593	169.200	70.073	167.953
NWS	C	31	155	232.574	67.644	167.501	66.904	165.670
NWS	C	32	160	226.659	64.663	165.413	63.702	162.956
NWS	C	33	165	220.357	61.674	162.975	60.496	159.862
NWS	C	34	170	213.741	58.699	160.227	57.309	156.433
NWS	C	35	175	206.877	55.756	157.204	54.163	152.714
NWS	C	36	180	199.827	52.861	153.942	51.078	148.749
NWS	C	37	185	192.646	50.027	150.473	48.067	144.579
NWS	C	38	190	185.385	47.265	146.831	45.144	140.241
NWS	C	39	195	178.090	44.585	143.042	42.319	135.771
NWS	C	40	200	170.802	41.993	139.136	39.599	131.204
NWS	O	1	5	0.686	0.437	0.539	0.307	0.379
NWS	O	2	10	3.099	1.725	2.238	1.349	1.750
NWS	O	3	15	7.206	3.722	4.963	3.088	4.118
NWS	O	4	20	12.769	6.275	8.510	5.419	7.350
NWS	O	5	25	19.495	9.239	12.677	8.218	11.277
NWS	O	6	30	27.089	12.487	17.277	11.365	15.724
NWS	O	7	35	35.272	15.909	22.142	14.747	20.525
NWS	O	8	40	43.793	19.412	27.130	18.265	25.528
NWS	O	9	45	52.432	22.915	32.119	21.832	30.600
NWS	O	10	50	61.001	26.356	37.010	25.372	35.629
NWS	O	11	55	69.345	29.680	41.720	28.826	40.519
NWS	O	12	60	77.334	32.848	46.187	32.141	45.193
NWS	O	13	65	84.868	35.826	50.361	35.278	49.590
NWS	O	14	70	91.869	38.590	54.205	38.205	53.664
NWS	O	15	75	98.282	41.125	57.697	40.900	57.382
NWS	O	16	80	104.066	43.418	60.819	43.347	60.719
NWS	O	17	85	109.201	45.465	63.566	45.536	63.665
NWS	O	18	90	113.676	47.263	65.936	47.462	66.213
NWS	O	19	95	117.493	48.815	67.935	49.126	68.367
NWS	O	20	100	120.664	50.125	69.573	50.530	70.134
NWS	O	21	105	123.206	51.202	70.862	51.681	71.525
NWS	O	22	110	125.145	52.052	71.819	52.588	72.557
NWS	O	23	115	126.509	52.688	72.461	53.261	73.248
NWS	O	24	120	127.331	53.121	72.807	53.713	73.619
NWS	O	25	125	127.646	53.362	72.879	53.956	73.690
NWS	O	26	130	127.489	53.425	72.697	54.004	73.485
NWS	O	27	135	126.899	53.321	72.281	53.872	73.027
NWS	O	28	140	125.911	53.065	71.653	53.573	72.338
NWS	O	29	145	124.564	52.670	70.833	53.123	71.442
NWS	O	30	150	122.894	52.146	69.841	52.534	70.360
NWS	O	31	155	120.935	51.508	68.696	51.822	69.114
NWS	O	32	160	118.722	50.767	67.416	50.999	67.724
NWS	O	33	165	116.287	49.934	66.020	50.078	66.210
NWS	O	34	170	113.661	49.020	64.523	49.071	64.590
NWS	O	35	175	110.873	48.035	62.941	47.991	62.882
NWS	O	36	180	107.949	46.990	61.288	46.847	61.102
NWS	O	37	185	104.915	45.893	59.579	45.651	59.265
NWS	O	38	190	101.795	44.753	57.825	44.411	57.384
NWS	O	39	195	98.610	43.578	56.038	43.138	55.472
NWS	O	40	200	95.380	42.376	54.229	41.838	53.541
PJP	C	1	5	1.150	1.100	0.283	0.915	0.235
PJP	C	2	10	5.954	5.598	1.032	5.027	0.927
PJP	C	3	15	14.888	13.858	2.143	12.894	1.994
PJP	C	4	20	27.635	25.542	3.534	24.276	3.359
PJP	C	5	25	43.569	40.051	5.134	38.618	4.950
PJP	C	6	30	61.948	56.699	6.885	55.241	6.708
PJP	C	7	35	82.023	74.799	8.736	73.445	8.578
PJP	C	8	40	103.082	93.713	10.646	92.566	10.515
PJP	C	9	45	124.487	112.867	12.578	112.005	12.482
PJP	C	10	50	145.686	131.774	14.504	131.240	14.446

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER M3/HA	ADJUSTED DECIDUOUS M3/HA
PJP	C	11	55	166.214	150.023	16.399	149.836	16.378
PJP	C	12	60	185.695	167.287	18.241	167.437	18.258
PJP	C	13	65	203.833	183.310	20.015	183.768	20.065
PJP	C	14	70	220.409	197.905	21.708	198.622	21.787
PJP	C	15	75	235.268	210.942	23.309	211.858	23.410
PJP	C	16	80	248.314	222.343	24.810	223.388	24.926
PJP	C	17	85	259.502	232.075	26.206	233.172	26.329
PJP	C	18	90	268.825	240.140	27.492	241.210	27.615
PJP	C	19	95	276.314	246.568	28.668	247.534	28.780
PJP	C	20	100	282.026	251.416	29.732	252.201	29.825
PJP	C	21	105	286.038	254.758	30.684	255.290	30.748
PJP	C	22	110	288.446	256.680	31.526	256.894	31.553
PJP	C	23	115	289.356	257.281	32.260	257.117	32.240
PJP	C	24	120	288.883	256.664	32.889	256.070	32.813
PJP	C	25	125	287.146	254.937	33.417	253.869	33.277
PJP	C	26	130	284.264	252.208	33.846	250.630	33.634
PJP	C	27	135	280.360	248.585	34.181	246.470	33.890
PJP	C	28	140	275.551	244.173	34.427	241.501	34.050
PJP	C	29	145	269.951	239.074	34.588	235.832	34.119
PJP	C	30	150	263.670	233.385	34.668	229.569	34.101
PJP	C	31	155	256.812	227.198	34.673	222.808	34.003
PJP	C	32	160	249.474	220.599	34.608	215.644	33.830
PJP	C	33	165	241.747	213.669	34.476	208.160	33.587
PJP	C	34	170	233.716	206.480	34.283	200.437	33.280
PJP	C	35	175	225.458	199.102	34.034	192.545	32.913
PJP	C	36	180	217.042	191.595	33.732	184.551	32.492
PJP	C	37	185	208.533	184.014	33.382	176.512	32.021
PJP	C	38	190	199.988	176.411	32.989	168.482	31.506
PJP	C	39	195	191.457	168.829	32.555	160.506	30.951
PJP	C	40	200	182.985	161.306	32.087	152.625	30.360
PJP	O	1	5	0.966	0.947	0.192	0.803	0.163
PJP	O	2	10	4.773	4.639	0.610	4.219	0.555
PJP	O	3	15	11.641	11.257	1.169	10.546	1.096
PJP	O	4	20	21.266	20.488	1.823	19.528	1.738
PJP	O	5	25	33.159	31.854	2.539	30.711	2.448
PJP	O	6	30	46.776	44.830	3.291	43.577	3.199
PJP	O	7	35	61.578	58.898	4.060	57.607	3.971
PJP	O	8	40	77.066	73.583	4.831	72.318	4.748
PJP	O	9	45	92.793	88.462	5.591	87.277	5.516
PJP	O	10	50	108.375	103.174	6.331	102.109	6.266
PJP	O	11	55	123.491	117.417	7.044	116.502	6.989
PJP	O	12	60	137.880	130.946	7.724	130.200	7.680
PJP	O	13	65	151.335	143.570	8.367	143.001	8.334
PJP	O	14	70	163.703	155.148	8.969	154.756	8.947
PJP	O	15	75	174.872	165.580	9.529	165.356	9.516
PJP	O	16	80	184.773	174.802	10.045	174.732	10.041
PJP	O	17	85	193.369	182.782	10.516	182.849	10.520
PJP	O	18	90	200.651	189.517	10.943	189.698	10.953
PJP	O	19	95	206.635	195.023	11.325	195.294	11.341
PJP	O	20	100	211.353	199.335	11.664	199.669	11.684
PJP	O	21	105	214.856	202.501	11.960	202.873	11.982
PJP	O	22	110	217.203	204.581	12.216	204.965	12.238
PJP	O	23	115	218.465	205.641	12.431	206.012	12.453
PJP	O	24	120	218.716	205.754	12.608	206.088	12.629
PJP	O	25	125	218.036	204.995	12.749	205.270	12.766
PJP	O	26	130	216.506	203.443	12.855	203.639	12.867
PJP	O	27	135	214.207	201.175	12.928	201.272	12.935
PJP	O	28	140	211.220	198.266	12.971	198.250	12.970
PJP	O	29	145	207.624	194.791	12.985	194.649	12.975
PJP	O	30	150	203.494	190.823	12.971	190.542	12.952
PJP	O	31	155	198.902	186.428	12.932	186.000	12.903
PJP	O	32	160	193.919	181.673	12.870	181.090	12.829

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS ADJUSTED M3/HA
PJP	O	33	165	188.607	176.617	12.786	175.875	12.733
PJP	O	34	170	183.028	171.317	12.683	170.412	12.616
PJP	O	35	175	177.238	165.826	12.561	164.758	12.480
PJP	O	36	180	171.287	160.191	12.422	158.960	12.327
PJP	O	37	185	165.222	154.456	12.268	153.064	12.158
PJP	O	38	190	159.087	148.661	12.101	147.112	11.975
PJP	O	39	195	152.919	142.842	11.922	141.140	11.780
PJP	O	40	200	146.754	137.030	11.731	135.181	11.573
PTA	C	1	5	1.197	0.377	1.115	0.302	0.894
PTA	C	2	10	6.068	1.428	5.502	1.250	4.818
PTA	C	3	15	14.933	3.014	13.331	2.754	12.180
PTA	C	4	20	27.337	5.006	24.138	4.696	22.641
PTA	C	5	25	42.553	7.293	37.262	6.966	35.588
PTA	C	6	30	59.782	9.780	52.002	9.463	50.319
PTA	C	7	35	78.248	12.383	67.689	12.101	66.147
PTA	C	8	40	97.248	15.037	83.731	14.805	82.443
PTA	C	9	45	116.173	17.683	99.620	17.513	98.660
PTA	C	10	50	134.515	20.277	114.941	20.172	114.344
PTA	C	11	55	151.871	22.781	129.363	22.740	129.131
PTA	C	12	60	167.928	25.167	142.639	25.185	142.743
PTA	C	13	65	182.459	27.411	154.591	27.479	154.980
PTA	C	14	70	195.315	29.497	165.105	29.605	165.710
PTA	C	15	75	206.406	31.413	174.118	31.547	174.859
PTA	C	16	80	215.700	33.153	181.613	33.297	182.403
PTA	C	17	85	223.207	34.711	187.606	34.850	188.357
PTA	C	18	90	228.972	36.088	192.144	36.205	192.767
PTA	C	19	95	233.070	37.284	195.294	37.363	195.706
PTA	C	20	100	235.593	38.304	197.139	38.328	197.264
PTA	C	21	105	236.650	39.151	197.774	39.106	197.544
PTA	C	22	110	236.360	39.834	197.300	39.704	196.656
PTA	C	23	115	234.847	40.357	195.824	40.129	194.718
PTA	C	24	120	232.237	40.731	193.452	40.393	191.844
PTA	C	25	125	228.656	40.964	190.290	40.503	188.152
PTA	C	26	130	224.226	41.063	186.440	40.472	183.754
PTA	C	27	135	219.066	41.040	182.001	40.308	178.757
PTA	C	28	140	213.287	40.902	177.066	40.024	173.263
PTA	C	29	145	206.996	40.659	171.722	39.628	167.368
PTA	C	30	150	200.291	40.320	166.050	39.132	161.159
PTA	C	31	155	193.263	39.893	160.124	38.546	154.717
PTA	C	32	160	185.994	39.387	154.014	37.879	148.115
PTA	C	33	165	178.560	38.811	147.779	37.141	141.419
PTA	C	34	170	171.028	38.172	141.475	36.340	134.687
PTA	C	35	175	163.458	37.477	135.150	35.486	127.971
PTA	C	36	180	155.902	36.734	128.848	34.587	121.316
PTA	C	37	185	148.408	35.949	122.606	33.649	114.759
PTA	C	38	190	141.015	35.129	116.455	32.680	108.335
PTA	C	39	195	133.757	34.279	110.424	31.686	102.071
PTA	C	40	200	126.663	33.405	104.535	30.674	95.989
PTA	O	1	5	0.830	0.933	0.643	0.491	0.339
PTA	O	2	10	3.798	3.360	2.853	2.054	1.744
PTA	O	3	15	8.847	6.582	6.571	4.427	4.420
PTA	O	4	20	15.631	10.050	11.572	7.265	8.366
PTA	O	5	25	23.739	13.384	17.592	10.257	13.482
PTA	O	6	30	32.759	16.349	24.367	13.154	19.605
PTA	O	7	35	42.315	18.813	31.651	15.775	26.540
PTA	O	8	40	52.077	20.725	39.226	18.003	34.074
PTA	O	9	45	61.767	22.081	46.900	19.772	41.995
PTA	O	10	50	71.155	22.916	54.511	21.060	50.095
PTA	O	11	55	80.059	23.282	61.921	21.877	58.183
PTA	O	12	60	88.341	23.242	69.020	22.254	66.087
PTA	O	13	65	95.899	22.861	75.722	22.239	73.660
PTA	O	14	70	102.664	22.207	81.958	21.887	80.777

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS M3/HA
PTA	O	15	75	108.595	21.338	87.679	21.256	87.340
PTA	O	16	80	113.675	20.311	92.852	20.403	93.272
PTA	O	17	85	117.904	19.174	97.457	19.384	98.521
PTA	O	18	90	121.301	17.969	101.486	18.246	103.055
PTA	O	19	95	123.893	16.729	104.940	17.035	106.858
PTA	O	20	100	125.720	15.483	107.827	15.786	109.934
PTA	O	21	105	126.827	14.255	110.163	14.531	112.296
PTA	O	22	110	127.264	13.061	111.969	13.294	113.969
PTA	O	23	115	127.084	11.915	113.269	12.096	114.988
PTA	O	24	120	126.342	10.826	114.092	10.949	115.393
PTA	O	25	125	125.094	9.800	114.466	9.865	115.229
PTA	O	26	130	123.394	8.841	114.423	8.851	114.543
PTA	O	27	135	121.294	7.952	113.995	7.909	113.385
PTA	O	28	140	118.847	7.131	113.213	7.042	111.805
PTA	O	29	145	116.101	6.377	112.111	6.249	109.852
PTA	O	30	150	113.103	5.689	110.718	5.528	107.575
PTA	O	31	155	109.895	5.063	109.066	4.875	105.019
PTA	O	32	160	106.517	4.496	107.185	4.288	102.228
PTA	O	33	165	103.007	3.985	105.101	3.763	99.244
PTA	O	34	170	99.398	3.524	102.842	3.293	96.104
PTA	O	35	175	95.720	3.111	100.434	2.876	92.844
PTA	O	36	180	92.003	2.742	97.899	2.507	89.496
PTA	O	37	185	88.270	2.413	95.261	2.181	86.089
PTA	O	38	190	84.543	2.120	92.539	1.893	82.650
PTA	O	39	195	80.842	1.860	89.754	1.641	79.201
PTA	O	40	200	77.184	1.629	86.922	1.420	75.764
PWS	C	1	5	0.896	0.802	0.449	0.574	0.321
PWS	C	2	10	4.531	3.945	1.720	3.155	1.376
PWS	C	3	15	11.257	9.659	3.640	8.176	3.081
PWS	C	4	20	20.907	17.770	6.039	15.604	5.303
PWS	C	5	25	33.103	27.956	8.768	25.199	7.904
PWS	C	6	30	47.383	39.832	11.702	36.624	10.759
PWS	C	7	35	63.263	53.006	14.733	49.504	13.760
PWS	C	8	40	80.269	67.095	17.777	63.456	16.812
PWS	C	9	45	97.958	81.745	20.762	78.117	19.840
PWS	C	10	50	115.930	96.637	23.634	93.149	22.781
PWS	C	11	55	133.834	111.491	26.351	108.249	25.584
PWS	C	12	60	151.366	126.064	28.880	123.153	28.213
PWS	C	13	65	168.271	140.153	31.200	137.632	30.639
PWS	C	14	70	184.341	153.588	33.295	151.499	32.842
PWS	C	15	75	199.409	166.236	35.158	164.598	34.811
PWS	C	16	80	213.347	177.991	36.785	176.807	36.540
PWS	C	17	85	226.061	188.777	38.177	188.035	38.027
PWS	C	18	90	237.490	198.540	39.339	198.216	39.274
PWS	C	19	95	247.598	207.248	40.278	207.309	40.290
PWS	C	20	100	256.373	214.886	41.004	215.292	41.081
PWS	C	21	105	263.822	221.458	41.528	222.162	41.660
PWS	C	22	110	269.967	226.976	41.862	227.930	42.037
PWS	C	23	115	274.848	231.468	42.018	232.621	42.227
PWS	C	24	120	278.511	234.968	42.011	236.268	42.243
PWS	C	25	125	281.014	237.518	41.853	238.915	42.099
PWS	C	26	130	282.419	239.164	41.557	240.611	41.809
PWS	C	27	135	282.795	239.958	41.138	241.408	41.387
PWS	C	28	140	282.213	239.955	40.608	241.366	40.847
PWS	C	29	145	280.744	239.209	39.979	240.542	40.202
PWS	C	30	150	278.463	237.779	39.263	238.998	39.465
PWS	C	31	155	275.443	235.720	38.472	236.795	38.648
PWS	C	32	160	271.755	233.090	37.616	233.994	37.761
PWS	C	33	165	267.471	229.944	36.704	230.653	36.817
PWS	C	34	170	262.656	226.335	35.747	226.831	35.825
PWS	C	35	175	257.377	222.316	34.752	222.584	34.794
PWS	C	36	180	251.696	217.935	33.728	217.964	33.732

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS ADJUSTED M3/HA
PWS	C	37	185	245.671	213.241	32.682	213.023	32.649
PWS	C	38	190	239.358	208.279	31.621	207.808	31.549
PWS	C	39	195	232.808	203.091	30.550	202.366	30.441
PWS	C	40	200	226.069	197.716	29.476	196.739	29.330
PWS	O	1	5	0.703	0.627	0.323	0.464	0.239
PWS	O	2	10	3.263	2.778	1.227	2.264	1.000
PWS	O	3	15	7.724	6.394	2.606	5.487	2.236
PWS	O	4	20	13.872	11.259	4.361	9.999	3.873
PWS	O	5	25	21.419	17.122	6.406	15.587	5.832
PWS	O	6	30	30.054	23.729	8.665	22.015	8.039
PWS	O	7	35	39.477	30.845	11.072	29.050	10.427
PWS	O	8	40	49.410	38.260	13.569	36.474	12.935
PWS	O	9	45	59.601	45.787	16.108	44.090	15.511
PWS	O	10	50	69.832	53.269	18.647	51.725	18.107
PWS	O	11	55	79.915	60.574	21.153	59.231	20.684
PWS	O	12	60	89.693	67.592	23.596	66.484	23.209
PWS	O	13	65	99.038	74.238	25.953	73.383	25.654
PWS	O	14	70	107.845	80.445	28.205	79.849	27.996
PWS	O	15	75	116.038	86.163	30.338	85.821	30.217
PWS	O	16	80	123.556	91.357	32.338	91.254	32.302
PWS	O	17	85	130.360	96.006	34.199	96.120	34.240
PWS	O	18	90	136.427	100.100	35.915	100.404	36.024
PWS	O	19	95	141.746	103.637	37.481	104.098	37.648
PWS	O	20	100	146.318	106.625	38.897	107.208	39.110
PWS	O	21	105	150.155	109.076	40.163	109.745	40.409
PWS	O	22	110	153.274	111.009	41.280	111.727	41.547
PWS	O	23	115	155.703	112.447	42.251	113.177	42.526
PWS	O	24	120	157.470	113.414	43.080	114.121	43.349
PWS	O	25	125	158.610	113.938	43.771	114.589	44.021
PWS	O	26	130	159.160	114.049	44.329	114.612	44.548
PWS	O	27	135	159.159	113.776	44.760	114.223	44.936
PWS	O	28	140	158.647	113.150	45.070	113.455	45.192
PWS	O	29	145	157.665	112.201	45.266	112.342	45.323
PWS	O	30	150	156.252	110.960	45.353	110.917	45.335
PWS	O	31	155	154.450	109.455	45.338	109.212	45.237
PWS	O	32	160	152.296	107.716	45.228	107.260	45.036
PWS	O	33	165	149.829	105.769	45.029	105.089	44.739
PWS	O	34	170	147.084	103.640	44.747	102.730	44.354
PWS	O	35	175	144.098	101.355	44.390	100.210	43.888
PWS	O	36	180	140.903	98.936	43.963	97.554	43.349
PWS	O	37	185	137.529	96.406	43.472	94.787	42.742
PWS	O	38	190	134.006	93.784	42.923	91.932	42.075
PWS	O	39	195	130.362	91.090	42.322	89.008	41.354
PWS	O	40	200	126.622	88.341	41.673	86.036	40.586
UBS	C	1	5	1.033	1.024	0.130	0.916	0.116
UBS	C	2	10	5.049	4.985	0.368	4.702	0.347
UBS	C	3	15	12.199	12.012	0.662	11.562	0.637
UBS	C	4	20	22.081	21.702	0.989	21.119	0.962
UBS	C	5	25	34.122	33.486	1.333	32.815	1.307
UBS	C	6	30	47.708	46.760	1.686	46.048	1.660
UBS	C	7	35	62.252	60.950	2.038	60.237	2.014
UBS	C	8	40	77.227	75.540	2.386	74.863	2.364
UBS	C	9	45	92.177	90.086	2.723	89.472	2.705
UBS	C	10	50	106.721	104.218	3.048	103.688	3.033
UBS	C	11	55	120.554	117.641	3.359	117.207	3.346
UBS	C	12	60	133.437	130.126	3.652	129.794	3.643
UBS	C	13	65	145.196	141.503	3.928	141.275	3.921
UBS	C	14	70	155.710	151.659	4.185	151.529	4.181
UBS	C	15	75	164.904	160.523	4.423	160.483	4.421
UBS	C	16	80	172.746	168.066	4.641	168.103	4.642
UBS	C	17	85	179.232	174.286	4.841	174.388	4.843
UBS	C	18	90	184.388	179.212	5.021	179.363	5.025

YIELD STRATUM	DENSITY CLASS*	PERIOD	AGE CLASS	TOTAL M3/HA	CONIFER M3/HA	DECIDUOUS M3/HA	CONIFER ADJUSTED M3/HA	DECIDUOUS ADJUSTED M3/HA
UBS	C	19	95	188.261	182.889	5.183	183.074	5.188
UBS	C	20	100	190.913	185.380	5.326	185.582	5.332
UBS	C	21	105	192.419	186.759	5.452	186.961	5.458
UBS	C	22	110	192.859	187.106	5.561	187.293	5.566
UBS	C	23	115	192.324	186.509	5.653	186.666	5.658
UBS	C	24	120	190.902	185.055	5.730	185.169	5.733
UBS	C	25	125	188.686	182.834	5.792	182.893	5.794
UBS	C	26	130	185.765	179.934	5.840	179.926	5.839
UBS	C	27	135	182.227	176.440	5.874	176.356	5.871
UBS	C	28	140	178.156	172.435	5.896	172.265	5.890
UBS	C	29	145	173.631	167.995	5.906	167.734	5.897
UBS	C	30	150	168.729	163.194	5.905	162.837	5.892
UBS	C	31	155	163.519	158.100	5.893	157.643	5.876
UBS	C	32	160	158.066	152.775	5.872	152.215	5.851
UBS	C	33	165	152.429	147.278	5.842	146.614	5.816
UBS	C	34	170	146.663	141.660	5.804	140.891	5.772
UBS	C	35	175	140.816	135.968	5.758	135.095	5.721
UBS	C	36	180	134.931	130.244	5.705	129.269	5.662
UBS	C	37	185	129.048	124.527	5.645	123.452	5.596
UBS	C	38	190	123.201	118.847	5.580	117.676	5.525
UBS	C	39	195	117.419	113.235	5.509	111.971	5.448
UBS	C	40	200	111.729	107.715	5.434	106.363	5.366
UBS	O	1	5	0.641	0.629	0.101	0.552	0.089
UBS	O	2	10	2.889	2.809	0.306	2.605	0.284
UBS	O	3	15	6.726	6.505	0.576	6.179	0.547
UBS	O	4	20	11.948	11.510	0.892	11.089	0.859
UBS	O	5	25	18.298	17.572	1.242	17.090	1.208
UBS	O	6	30	25.515	24.438	1.616	23.932	1.583
UBS	O	7	35	33.348	31.869	2.009	31.371	1.977
UBS	O	8	40	41.569	39.647	2.413	39.184	2.384
UBS	O	9	45	49.974	47.579	2.823	47.175	2.799
UBS	O	10	50	58.389	55.501	3.237	55.171	3.218
UBS	O	11	55	66.662	63.272	3.650	63.026	3.636
UBS	O	12	60	74.671	70.777	4.061	70.620	4.052
UBS	O	13	65	82.313	77.921	4.465	77.852	4.461
UBS	O	14	70	89.509	84.631	4.862	84.645	4.863
UBS	O	15	75	96.196	90.850	5.251	90.940	5.256
UBS	O	16	80	102.330	96.539	5.628	96.693	5.637
UBS	O	17	85	107.880	101.671	5.994	101.874	6.006
UBS	O	18	90	112.829	106.232	6.347	106.468	6.361
UBS	O	19	95	117.170	110.215	6.687	110.468	6.702
UBS	O	20	100	120.905	113.626	7.013	113.877	7.029
UBS	O	21	105	124.043	116.474	7.325	116.704	7.339
UBS	O	22	110	126.601	118.776	7.621	118.968	7.634
UBS	O	23	115	128.599	120.552	7.903	120.687	7.912
UBS	O	24	120	130.062	121.828	8.170	121.888	8.174
UBS	O	25	125	131.017	122.628	8.422	122.597	8.419
UBS	O	26	130	131.494	122.984	8.658	122.846	8.648
UBS	O	27	135	131.525	122.923	8.879	122.665	8.861
UBS	O	28	140	131.142	122.479	9.086	122.085	9.057
UBS	O	29	145	130.377	121.680	9.277	121.141	9.236
UBS	O	30	150	129.262	120.558	9.455	119.862	9.400
UBS	O	31	155	127.830	119.144	9.617	118.283	9.548
UBS	O	32	160	126.112	117.467	9.766	116.432	9.680
UBS	O	33	165	124.138	115.555	9.902	114.341	9.798
UBS	O	34	170	121.937	113.435	10.024	112.037	9.900
UBS	O	35	175	119.538	111.135	10.132	109.550	9.988
UBS	O	36	180	116.965	108.678	10.229	106.904	10.062
UBS	O	37	185	114.246	106.089	10.313	104.124	10.122
UBS	O	38	190	111.402	103.388	10.385	101.233	10.169
UBS	O	39	195	108.456	100.597	10.446	98.253	10.203
UBS	O	40	200	105.429	97.734	10.496	95.205	10.224

* Density class: A, all density; C, closed same as Density Class 2; O: Open same as Density Class 1.

Yield Curve Model Coefficients

Merchantable volume model = a * (age^b) * EXP(-a*age)

STRATUM	Density Class	a	b	Volume Estimated
LBS	A	0.014980	2.088986	SOFTWOOD
MBS	C	0.018045	2.316421	SOFTWOOD
MBS	O	0.013376	2.143564	SOFTWOOD
MDE	C	0.009609	1.918523	SOFTWOOD
MDE	O	0.011683	1.909983	SOFTWOOD
MWS	C	0.025952	2.425577	SOFTWOOD
MWS	O	0.020123	2.223689	SOFTWOOD
NWS	C	0.023610	2.304412	SOFTWOOD
NWS	O	0.016222	2.097214	SOFTWOOD
PJP	C	0.021771	2.504037	SOFTWOOD
PJP	O	0.020703	2.441351	SOFTWOOD
PTA	C	0.015545	2.033150	SOFTWOOD
PTA	O	0.037197	2.117387	SOFTWOOD
PWS	C	0.017653	2.426021	SOFTWOOD
PWS	O	0.017649	2.273810	SOFTWOOD
UBS	C	0.022398	2.445286	SOFTWOOD
UBS	O	0.017381	2.285109	SOFTWOOD
LBS	A	0.000000	3.273445	HARDWOOD
MBS	C	0.034704	2.384242	HARDWOOD
MBS	O	0.016975	1.954896	HARDWOOD
MDE	C	0.028194	2.447444	HARDWOOD
MDE	O	0.024482	2.305973	HARDWOOD
MWS	C	0.021894	2.253349	HARDWOOD
MWS	O	0.017475	2.125012	HARDWOOD
NWS	C	0.017351	2.353642	HARDWOOD
NWS	O	0.017593	2.180619	HARDWOOD
PJP	C	0.012432	1.959457	HARDWOOD
PJP	O	0.012086	1.754728	HARDWOOD
PTA	C	0.023460	2.471694	HARDWOOD
PTA	O	0.018002	2.279473	HARDWOOD
PWS	C	0.017620	2.066028	HARDWOOD
PWS	O	0.013325	2.021972	HARDWOOD
UBS	C	0.010777	1.580955	HARDWOOD
UBS	O	0.007608	1.648185	HARDWOOD
LBS	A	0.014693	2.091062	TOTAL
MBS	C	0.022909	2.462250	TOTAL
MBS	O	0.015147	2.225063	TOTAL
MDE	C	0.026886	2.466973	TOTAL
MDE	O	0.022738	2.338855	TOTAL
MWS	C	0.026280	2.529069	TOTAL
MWS	O	0.020625	2.349500	TOTAL
NWS	C	0.020878	2.490252	TOTAL
NWS	O	0.018339	2.307344	TOTAL
PJP	C	0.021807	2.529425	TOTAL
PJP	O	0.020683	2.453841	TOTAL
PTA	C	0.023625	2.512389	TOTAL
PTA	O	0.021186	2.346598	TOTAL
PWS	C	0.018392	2.471495	TOTAL
PWS	O	0.017690	2.342918	TOTAL
UBS	C	0.022369	2.451322	TOTAL

* Density class: A, all density; C, closed same as Density Class 2; O: Open same as Density Class 1.