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A subregion-based compatible height and site index model for young and mature white spruce in Alberta

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Abstract. A compatible height and site index model expressed in the form of H = *f*(site index, age) was developed for white spruce in Alberta. The model was estimated by groups of natural subregions and by combined groups. It accommodated the data reasonably well across the full range of breast height age classes. The model can be used as a growth intercept model for young trees/stands, a juvenile height and site index model, and a regular height and site index model for mature trees/stands. Height is predicted directly from the model given site index and age (at breast height). Site index can be solved algebraically (or numerically) from the same model given height and age. The height and site index predictions from the same model are compatible, and can be made for any tree/stand older than two to three years breast height age. Tables and graphs arranged in different forms were prepared to facilitate the field application of the fitted model.

KEY WORDS. Site index, height growth, compatibility, site estimation at young ages, *Picea glauca*.

Introduction

This note shows, in graphical and tabular form, height and site index curves for white spruce (*Picea glauca* (Moench) Voss) based on a recently developed site index model derived from a logistic-type function (Monserud 1984; W.R. Dempster and Associates 1983; Alberta Forest Service 1985). It is designed to facilitate the field application of the following site index model:

$$[1] \qquad H = 1.3+(SI-1.3)\cdot\left(\frac{1+b_0(SI-1.3)+\exp[b_1+b_2\ln(50+b_3)-\ln(SI-1.3)]}{1+b_0(SI-1.3)+\exp[b_1+b_2\ln(Bhage+b_3)-\ln(SI-1.3)]}\right)$$

where: H = tree height (m)
SI = site index (m), which is the tree height at 50 years breast height age
Bhage = breast height age (years) at 1.3 m above ground
b_0, b_1, b_2 and b_3 = parameters to be estimated.

Prior to selecting model [1], different site index methodologies and numerous height and site index models were examined (Huang 1994; 1997a-b; Huang et al. 1997). Model [1] and several other models shown in Table 1, produced the most favourable results. Model [1] was selected because it gave slightly better performance at young and old ages than other models. In addition, site index can be explicitly solved (i.e., algebraically rearranged) from [1] given the height and breast height age of a site tree. This allows compatible height and site index predictions to be made from a single H = *f*(SI, age) equation without requiring numerical methods or iterative routines, or a separate site index prediction model fitted in the form of SI = *f*(H, age). Note that if model [2] or [4] was chosen, site index can also be solved algebraically (see Appendix 3).

A total of 1,097 sectioned white spruce trees were used in this study. Detailed data collection procedures are described in Alberta Forest Service (1988). A summary of the data by natural subregions and by groups of natural subregions, is shown in Table 2. Definitions for natural subregions of Alberta are provided in Appendix 1.

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Table 1. Potential height and site index models for white spruce.

[2] $$H = 1.3+(SI-1.3)\cdot\left(\frac{1+\exp[b_1+b_2\ln(50+b_3)-\ln(SI-1.3)]}{1+\exp[b_1+b_2\ln(Bhage+b_3)-\ln(SI-1.3)]}\right)$$

[3] $$H = 1.3+(SI-1.3)\cdot\left(\frac{1+\exp[b_1+b_2\ln(50+b_3)+b_4\ln(SI-1.3)]}{1+\exp[b_1+b_2\ln(Bhage+b_3)+b_4\ln(SI-1.3)]}\right)$$

[4] $$H = 1.3+(SI-1.3)\cdot\left(\frac{1+\exp\left(b_1+b_2\ln(50+b_3)+b_4[\ln(50+c)]^2-\ln(SI-1.3)\right)}{1+\exp\left(b_1+b_2\ln(Bhage+b_3)+b_4[\ln(Bhage+c)]^2-\ln(SI-1.3)\right)}\right), \quad with \ c=2$$

[5] $$H_2 = 1.3+(H_1-1.3)\cdot\left(\frac{1-\exp(-b\cdot T_2)}{1-\exp(-b\cdot T_1)}\right)^c, \quad b=b_0(H_1-1.3)^{b_1}b_2^{(H_1-1.3)} \quad c=b_3(H_1-1.3)^{b_4}T_1^{b_5}$$

[6] $$H_2 = 1.3+(H_1-1.3)\cdot\left(\frac{1-\exp(-b\cdot T_2)}{1-\exp(-b\cdot T_1)}\right)^c, \quad b=b_0(H_1-1.3)^{b_1}b_2^{(H_1-1.3)/T_1} \quad c=b_3(H_1-1.3)^{b_4}T_1^{b_5}$$

Note: For the non-reciprocal difference equation models [5] and [6], H_1 and T_1 are height and age at time one, and H_2 and T_2 are height and age at time two.

Table 2. A summary of the white spruce stem analysis data.

Subregion	N	Site index (m)				Height (m)				Bhage (years)				DBH (cm)			
		mean	min.	max.	SD	mean	min.	max.	SD	mean	min.	max.	SD	mean	min.	max.	SD
1	264	15.72	7.14	23.18	3.02	24.28	13.03	35.90	4.05	96.5	50.5	158.5	23.30	31.42	13.3	61.8	9.08
2	88	15.76	6.63	22.80	3.30	24.93	16.95	34.57	3.67	100.3	59.5	182.5	24.31	29.85	16.0	51.5	7.50
3	101	13.37	5.30	20.75	3.31	22.81	13.58	30.43	4.08	106.9	55.5	179.5	24.56	26.29	11.5	53.1	7.71
6	8	14.25	10.02	17.80	2.96	22.58	13.67	32.71	7.22	101.8	62.5	160.5	36.51	31.10	17.4	41.8	8.98
14	1	9.80	9.80	9.80		12.70	12.70	12.70		70.5	70.5	70.5		14.60	14.6	14.6	
1-6 & 12-16	462	15.17	5.30	23.18	3.29	24.03	12.70	35.90	4.14	99.51	50.5	182.5	24.32	29.95	11.5	61.8	8.74
7	1	8.72	8.72	8.72		13.00	13.00	13.00		68.5	68.5	68.5		25.60	25.6	25.6	
8	33	9.73	2.80	16.84	3.66	18.36	10.20	28.38	4.39	107.2	51.5	177.5	37.10	26.61	12.7	47.6	9.34
9	9	10.55	5.52	15.80	3.48	17.62	12.70	22.00	3.58	110.3	51.5	185.5	51.20	31.92	20.6	43.7	10.36
10	160	12.85	3.30	21.55	4.18	23.49	9.50	34.80	6.29	117.1	52.5	250.5	43.36	32.73	7.7	70.8	10.85
7-10	203	12.22	2.80	21.55	4.23	22.34	9.50	34.80	6.30	114.9	51.5	250.5	42.74	31.66	7.7	70.8	10.77
11	432	16.10	5.18	25.72	3.56	26.12	12.30	38.40	4.38	99.6	50.5	175.5	25.57	34.34	14.5	68.1	9.35
Combined	1097	14.99	2.80	25.72	3.84	24.54	9.50	38.40	4.91	102.4	50.5	250.5	29.64	32.00	7.7	70.8	9.58

Note: Natural subregions of Alberta are defined in Appendix 1; N = number of sectioned trees; min. = minimum; max. = maximum; SD = standard deviation.

Grouping of natural subregions is based on the screening of the original data, the sample size within each subregion, the ecological relevance of the subregions and an *F*-test using the nonlinear extra sum of squares method (Bates and Watts 1988; Huang 1997b). Asymptotic fit statistics for model [1], from the Gauss-Newton method based on the Taylor series expansion (Gallant 1987), are provided in Table 3. Fitted height and site index curves by groups of natural subregions, are dispalyed in Figures 1-3.

Table 3. Fit statistics for white spruce height and site index model [1].

Subregion	Estimate				n	MSE	R^2
	b_0	b_1	b_2	b_3			
1 to 6 and 12 to 16	0.044435	11.381718	-1.944325	6.728764	12777	2.2743	0.9683
7 to 10	0.015046	11.854239	-2.119662	9.725072	2168	2.2931	0.9676
11	0.068687	11.540158	-1.913760	6.273845	5380	2.1869	0.9718
Combined (provincial)	0.044435	11.381718	-1.944325	6.728764	12777	2.2743	0.9683

Note: n - total number of observations (height-age pairs) from sectioned trees; MSE - mean squared error (MSE = residual sum of squares (RSS)/residual degrees of freedom); and R^2 - coefficient of determination (R^2 = 1 - RSS/corrected total sum of squares). Because the model fitted for subregions 1-6 and 12-16 combined is very similar to the provincial model, the provincial model is assigned to subregions 1-6 and 12-16.

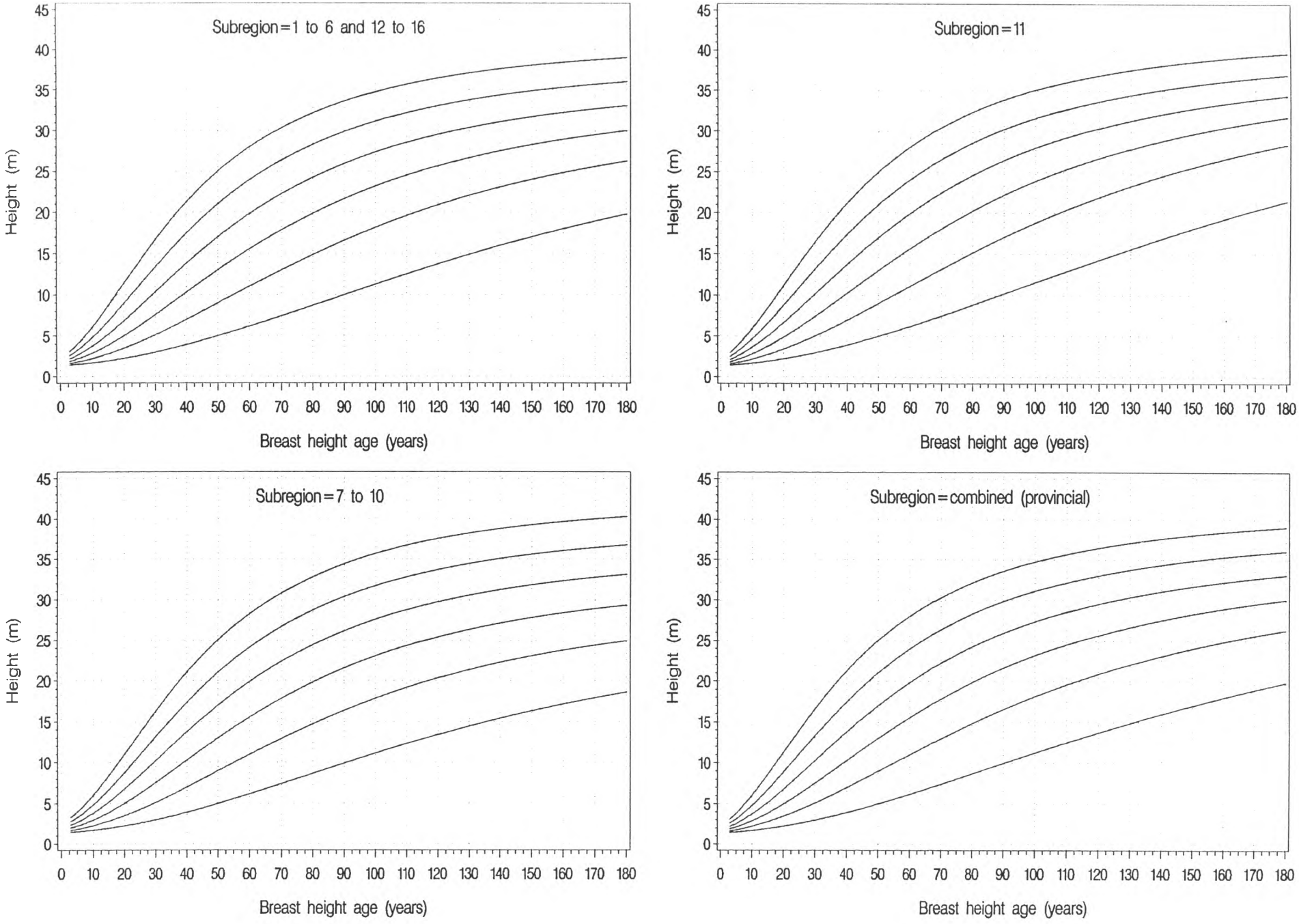
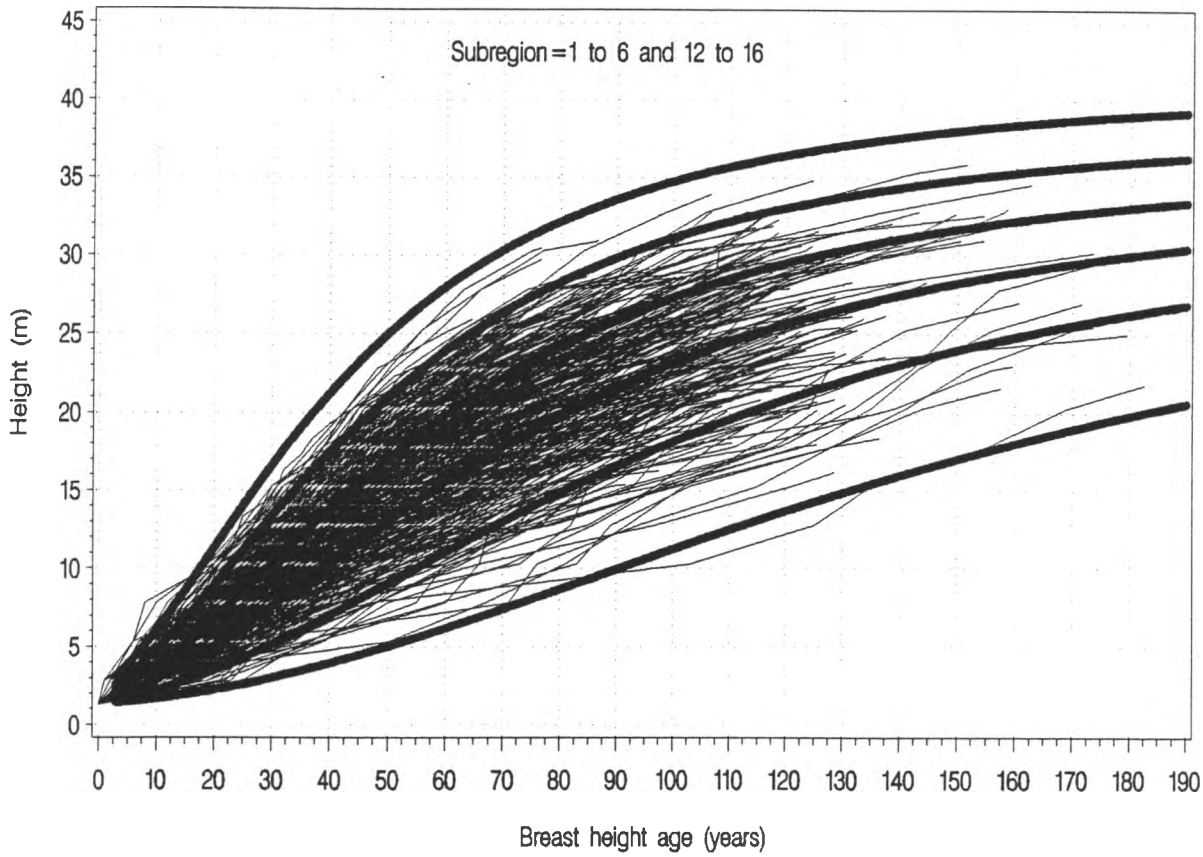


Figure 1. Height growth and site index curves for white spruce by groups of natural subregions. The curves were generated using site index values of 5, 9, 13, 17, 21 and 25 m (from bottom to top) at the reference breast height age of 50 years.



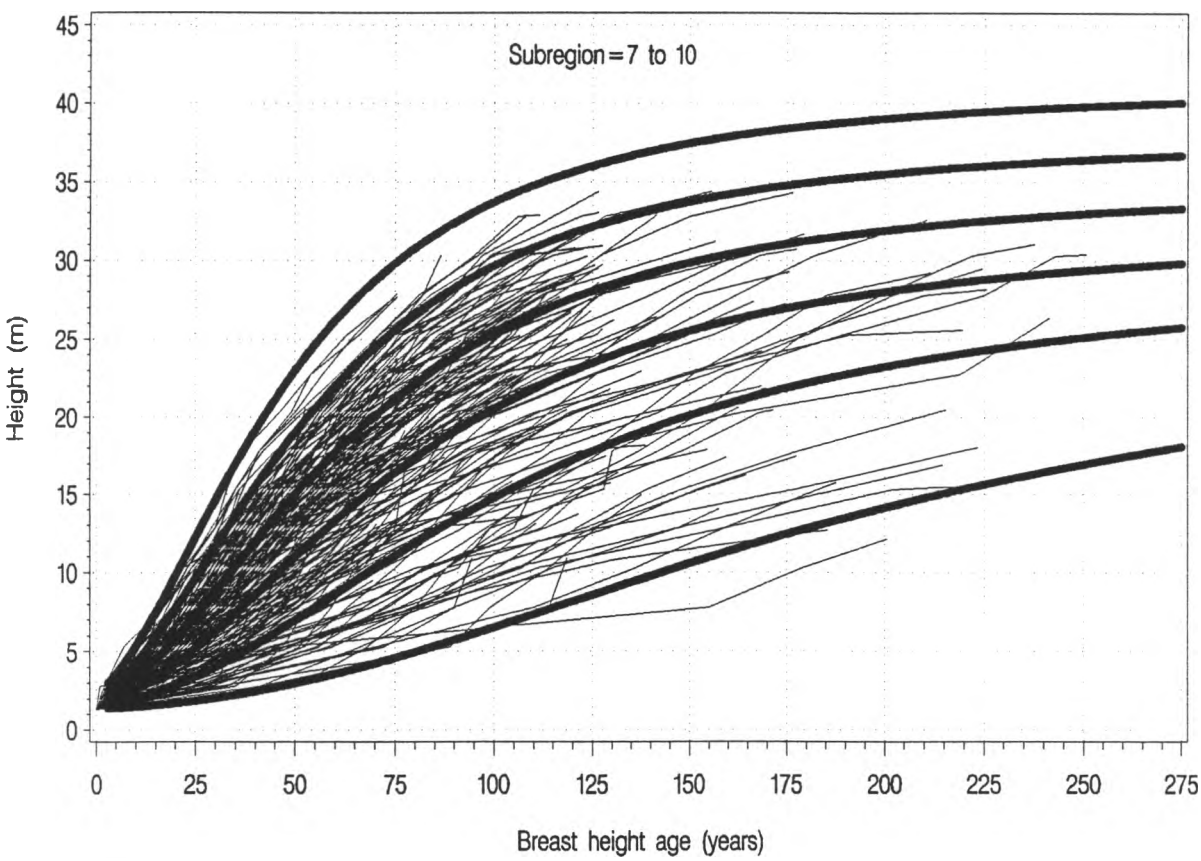


Figure 2. Fitted height growth and site index curves overlaid on the actual tree growth trajectories in different subregions. The curves were generated from model [1] using different site index values.

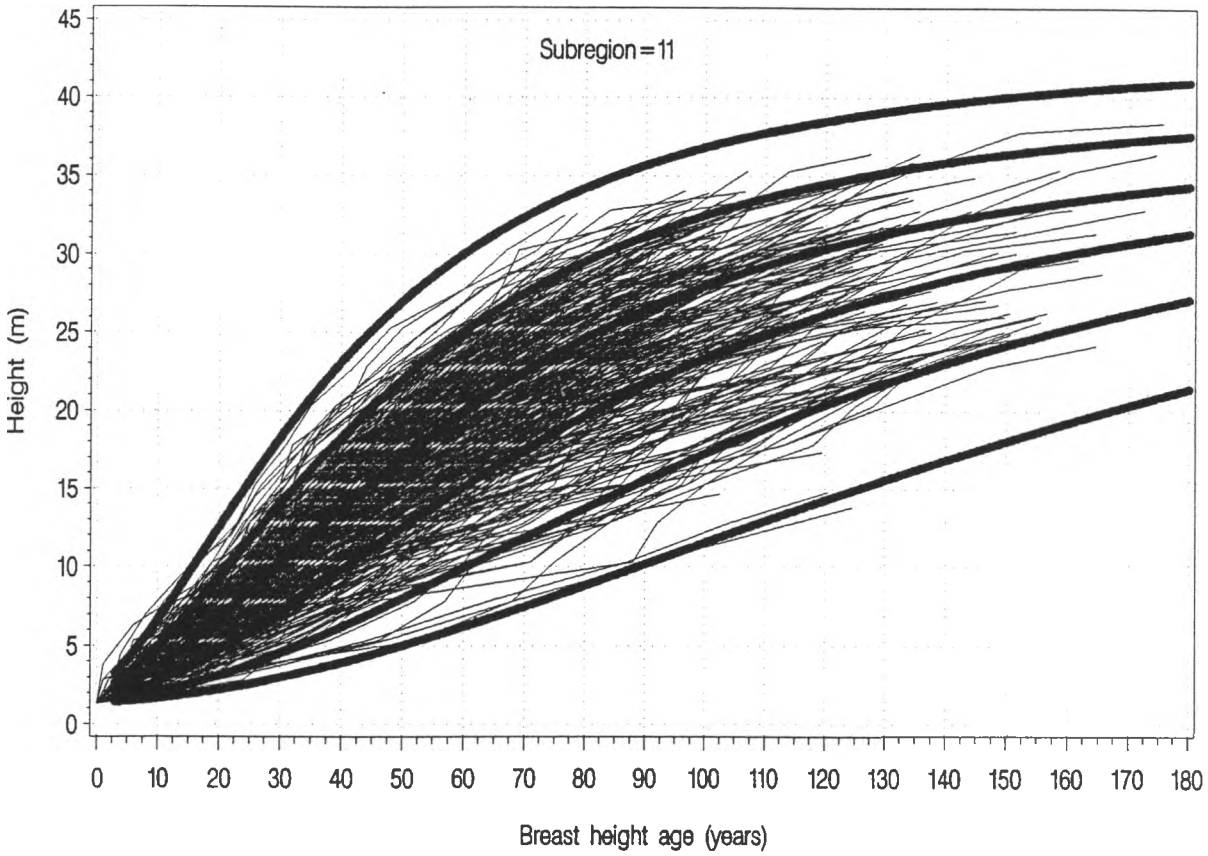


Figure 3. Fitted height growth and site index curves overlaid on the actual tree growth trajectories in subregion 11. The curves were generated from model [1] using different site index values.

Application

Estimating height at any age given site index: Given the site index value, height at any breast height age can be predicted directly from model [1]. Appendix 2 lists the complete height prediction tables by natural subregions. An example of such a table is shown in Table 4. Note that Bhage equals the ring count at 1.3 m above ground minus 0.5 (Figure 4). For practical purposes, the average correction factor of half-a-year (0.5) is not critical and can be ignored for trees older than 10 to 20 years.

Table 4. Provincial height and site index prediction table for white spruce (example).

Bhage*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
2.5	1.35	1.39	1.42	1.46	1.50	1.54	1.59	1.64	1.69	1.75	1.81	1.88	1.95	2.02	2.10	2.18	2.27	2.37	2.46	2.57	2.68	2.79	2.92
3.5	1.36	1.40	1.45	1.49	1.54	1.60	1.65	1.72	1.78	1.85	1.92	2.00	2.09	2.18	2.27	2.37	2.48	2.59	2.71	2.84	2.97	3.11	3.26
4.5	1.38	1.43	1.48	1.53	1.59	1.66	1.72	1.80	1.88	1.96	2.05	2.14	2.24	2.35	2.46	2.58	2.71	2.84	2.98	3.13	3.29	3.45	3.62
5.5	1.39	1.45	1.51	1.58	1.65	1.72	1.80	1.89	1.98	2.07	2.18	2.29	2.41	2.53	2.66	2.80	2.95	3.10	3.27	3.44	3.62	3.81	4.01
90.5	5.73	7.99	10.04	11.90	13.61	15.18	16.65	18.02	19.31	20.54	21.71	22.84	23.92	24.98	26.01	27.01	28.00	28.97	29.92	30.87	31.81	32.74	33.66
91.5	5.81	8.10	10.16	12.04	13.76	15.34	16.81	18.19	19.48	20.70	21.87	23.00	24.08	25.13	26.16	27.16	28.14	29.11	30.06	31.00	31.94	32.86	33.79
92.5	5.88	8.20	10.29	12.19	13.91	15.50	16.97	18.35	19.64	20.87	22.04	23.16	24.24	25.29	26.31	27.30	28.28	29.25	30.20	31.14	32.07	32.99	33.91
93.5	5.96	8.31	10.42	12.33	14.07	15.66	17.14	18.51	19.80	21.03	22.19	23.31	24.39	25.44	26.45	27.45	28.42	29.38	30.33	31.27	32.19	33.12	34.03
94.5	6.04	8.42	10.55	12.47	14.22	15.82	17.29	18.67	19.96	21.19	22.35	23.47	24.54	25.58	26.60	27.59	28.56	29.52	30.46	31.39	32.32	33.24	34.15
175.5	12.71	16.61	19.44	21.61	23.34	24.77	25.99	27.07	28.05	28.95	29.80	30.61	31.39	32.16	32.91	33.66	34.41	35.15	35.89	36.64	37.38	38.14	38.89
176.5	12.79	16.69	19.53	21.69	23.42	24.84	26.06	27.13	28.10	29.00	29.85	30.65	31.44	32.20	32.95	33.70	34.44	35.18	35.92	36.67	37.41	38.17	38.92
177.5	12.87	16.78	19.62	21.78	23.49	24.91	26.13	27.19	28.16	29.05	29.90	30.70	31.48	32.24	32.99	33.74	34.48	35.22	35.95	36.70	37.44	38.19	38.95
178.5	12.95	16.87	19.70	21.86	23.57	24.98	26.19	27.25	28.22	29.11	29.94	30.75	31.52	32.28	33.03	33.77	34.51	35.25	35.99	36.73	37.47	38.22	38.97
179.5	13.03	16.95	19.79	21.94	23.65	25.05	26.26	27.31	28.27	29.16	29.99	30.79	31.57	32.32	33.07	33.81	34.54	35.28	36.02	36.76	37.50	38.25	39.00

*Bhage = (ring count at 1.3 m above ground - 0.5).

Estimating site index given height and age: Given the height and breast height age of a site tree, site index (SI) can be predicted by algebraically rearranging model [1] without requiring numerical methods or iterative routines. The procedure involves solving

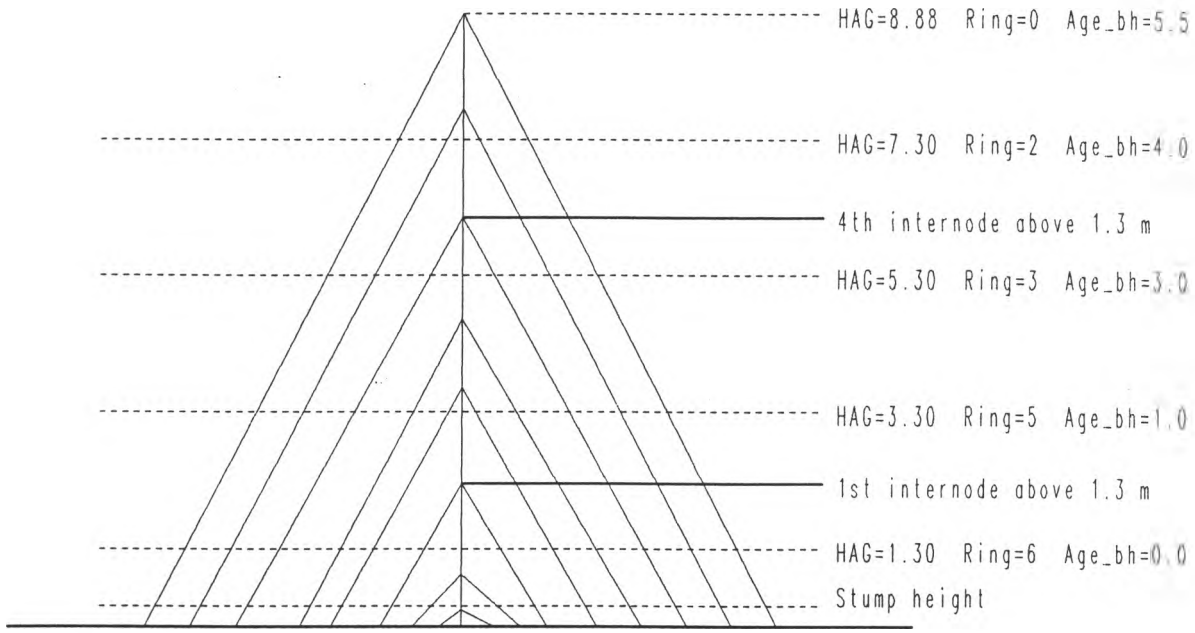


Figure 4. An illustration for calculating height above ground (HAG), age above breast height (Age_bh) and t-year growth intercept above 1.3 m from sectioned trees. Dashed lines represent potential sectioning points. Note that the 1st, 2nd, 3rd, ···, 6th internodes above 1.3 m correspond to 0.5, 1.5, 2.5, ···, 5.5 years Age_bh, or correspond to 0.5-, 1.5-, 2.5-, ···, 5.5-year growth above 1.3 m (which correspond further to t = 0.5, 1.5, 2.5, ···, 5.5 years and Bhage = 0.5, 1.5, 2.5, ···, 5.5 years, respectively).

x from the cubic polynomial: $ax^3+bx^2+cx+d = 0$, which is described in Appendix 3. The computations can be done using a hand calculator, or a spreadsheet application such as MS EXCEL or SAS/CALC. Two example algorithms written in SAS are provided in Appendix 3 to facilitate the computations.

Once the site index values for individual site trees are calculated, an average site index value for a plot (or a stand) can be obtained by averaging the site index values from all site trees selected in the plot (or in the stand).

Selecting site trees in the field: Within a sample plot, site trees are healthy, undamaged, unsuppressed, largest diameter (at the breast height of 1.3 m above ground) trees excluding "wolf", "veteran", or "super-dominant" trees. Depending on the size of the sample plot, the number of site trees required per plot should correspond to the 100 largest diameter trees per hectare per species. This removes the subjectiveness in determining "dominants" or "codominants", and allows site trees to be selected more or less consistently.

It is recommended that one, two, or three site trees, corresponding to plot sizes of 100, 200, or 300 m^2, respectively, be selected for site index estimation.

Estimating site index and making height projections for juvenile stands: The height and site index model developed in this study applies to any tree/stand older than two years breast height age (i.e., Bhage>2 years). One of the primary characteristics associated with model [1] is its "continuity", meaning that it applies to both young and mature trees/stands without requiring the use of different site index approaches and models, and various "smoothing" techniques to make better connections between site index curves fitted for young and mature stands separately.

Appendix 2 lists the complete site index prediction tables at young ages. An example of such a table is provided in Table 5. For instance, the site index value for a tree with a height H = 1.9 m and a ring count at 1.3 m = 11 (Bhage = 10.5 years), can be read directly from Table 5. To do this, the line having the height H = 1.9 m is identified. The predicted site index value, corresponding to the column having a ring count of 11, is 6.5 m.

Table 5. Provincial white spruce site index prediction table at young ages (example).

Height (m)	Ring count at 1.3 m above ground																								
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
1.5	7.0	6.1	5.4	4.8	4.4	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8
1.6	9.2	8.0	7.1	6.4	5.7	5.2	4.8	4.4	4.1	3.8	3.6	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1
1.7	11.1	9.7	8.6	7.7	7.0	6.3	5.8	5.3	5.0	4.6	4.3	4.1	3.8	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3
1.8	12.8	11.3	10.0	9.0	8.1	7.4	6.8	6.2	5.8	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.0	2.9	2.8	2.8	2.7	2.6
1.9	14.3	12.7	11.3	10.2	9.2	8.4	7.7	7.0	6.5	6.1	5.6	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.9
2.0	15.7	14.0	12.5	11.2	10.2	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1
2.1	17.0	15.1	13.6	12.3	11.1	10.2	9.3	8.6	7.9	7.4	6.9	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4
2.2	18.2	16.2	14.6	13.2	12.0	11.0	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.3	4.2	4.0	3.9	3.7	3.6
2.3	19.3	17.3	15.6	14.1	12.9	11.8	10.8	10.0	9.3	8.6	8.0	7.5	7.1	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8
2.4	20.4	18.3	16.5	15.0	13.6	12.5	11.5	10.6	9.9	9.2	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1
⋮																										
18.6	74.8	69.8	65.5	61.7	58.4	55.6	53.0	50.6	48.5	46.6	44.8	43.2	41.7	40.3	39.0	37.8	36.7	35.6	34.6	33.7	32.8	31.9	31.1	30.3	29.6	28.9
18.7	75.0	70.0	65.6	61.9	58.6	55.7	53.1	50.8	48.7	46.7	45.0	43.4	41.9	40.5	39.2	37.9	36.8	35.7	34.7	33.8	32.9	32.0	31.2	30.5	29.7	29.0
18.8	75.2	70.1	65.8	62.1	58.8	55.9	53.3	50.9	48.8	46.9	45.1	43.5	42.0	40.6	39.3	38.1	36.9	35.9	34.9	33.9	33.0	32.2	31.4	30.6	29.8	29.1
18.9	75.4	70.3	66.0	62.2	58.9	56.0	53.4	51.1	49.0	47.0	45.3	43.6	42.1	40.7	39.4	38.2	37.1	36.0	35.0	34.0	33.1	32.3	31.5	30.7	30.0	29.3

*Height = total tree height.

Approximating height and site index from graphs and tables: Height and site index values can be approximated from the graphs shown in Figure 1, or from the tables listed in Appendix 2. As an example, the approximate site index for a tree with H = 23 m and Bhage = 90.5 years (ring count at 1.3 m = 91), can be read from Table 4. To do this, the line having Bhage = 90.5 years is identified. The height of 23 m is located between 22.84 and 23.92, corresponding to site indices 14 and 15 m, respectively. Thus, an approximate site index for this tree is 14.5 m. If a linear interpolation is used, site index of the tree can be calculated by: $SI = SI_1 + [(SI_2 - SI_1)/(H_2 - H_1)](H - H_1) = 14 + [(15-14)/(23.92-22.84)](23.00-22.84) = 14.15$ (m). Note that this linear interpolation method is based on the principle of proportional parts. If (x_1, y_1) and (x_2, y_2) are two adjacent data points in a numerical table, a value of y, given a value of x between x_1 and x_2, is computed by: $y = y_1 + [(y_2 - y_1)/(x_2 - x_1)]\cdot(x - x_1)$.

Site index predictions based on growth intercept or early height increment: If growth intercept (GI) is defined as the average annual height increment in t-years above the breast height of 1.3 m, GI can be calculated according to $GI = (H_t - 1.3)/t$, where H_t is the total tree height. If, for example, the total tree height of a site tree is 2.80 m and the ring count at 1.3 m above ground is 6, then $H_t = 2.80$ m, Bhage = (6-0.5) = 5.5 and t = (6-0.5) = 5.5 years, where the average correction factor of half-a-year (0.5) is illustrated in Figure 4. According to Table 4, this tree corresponds to a site index of 18 m. The 5.5-year growth intercept of this tree above 1.3 m, is calculated as: GI = (2.80 - 1.3)/5.5 = 0.27 (m/year). According to Table 6, a GI value of 0.27 m in 5.5 years also corresponds to a 18 m site index.

Table 6. White spruce average annual height growth in t-years above 1.3 m on different sites (example).

t* (years)	Site index (m) at 50 years Bhage																						
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Average annual height growth (m/year) in t-years above 1.3 m - Provincial																						
2.5	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	0.35	0.39	0.43	0.47	0.51	0.55	0.60	0.65
3.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.44	0.48	0.52	0.56
4.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.34	0.37	0.41	0.44	0.48	0.52
5.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.49
6.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.45	0.48
7.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.47
8.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.37	0.41	0.44	0.47
9.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
10.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
11.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.32	0.35	0.38	0.41	0.44	0.48
12.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.18	0.20	0.23	0.25	0.27	0.30	0.33	0.35	0.38	0.41	0.45	0.48
13.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.36	0.39	0.42	0.45	0.48
14.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.36	0.39	0.42	0.45	0.48

*t = number of years above 1.3 m (t = number of pith nodes above 1.3 m - 0.5, or t = number of ring counts at 1.3 m - 0.5). For example, the 6th pith node above 1.3 m corresponds to a 5.5 year Bhage and a t = 5.5 years, a ring count of 10 at 1.3 m corresponds to a 9.5 year Bhage and a t = 9.5 years. See Figure 4 for an illustration.

Table 6 can be used to interpolate the site index given the average annual height growth in t-years above 1.3 m. A more convenient growth intercept based site index prediction table can be arranged as illustrated in Table 7. Similar tables are shown in Appendix 2. Site index can be read directly from Table 7 given the observed GI value in t-years above 1.3 m. Note that Tables 4, 5, 6 and 7 were generated from the same model [1], based on the estimated coefficients listed in Table 3. They provide compatible height and site index predictions across the full range of breast height age classes.

Table 7. Growth intercept based site index prediction table for white spruce (example).

GI	Ring count at 1.3 m above ground																								
(m/yrs)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage - Provincial																									
0.05	5.1	5.6	5.9	6.0	6.1	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7
0.10	8.1	8.9	9.4	9.6	9.7	9.7	9.7	9.6	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7
0.15	10.6	11.6	12.2	12.5	12.6	12.7	12.7	12.6	12.5	12.4	12.3	12.2	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.6	10.5	10.4
0.20	12.8	14.0	14.6	15.0	15.1	15.2	15.2	15.1	15.0	14.9	14.8	14.7	14.5	14.4	14.3	14.1	14.0	13.8	13.7	13.6	13.4	13.3	13.2	13.1	13.0	12.9
0.25	14.7	16.0	16.7	17.1	17.3	17.4	17.4	17.3	17.3	17.2	17.0	16.9	16.8	16.6	16.5	16.3	16.2	16.1	15.9	15.8	15.7	15.6	15.4	15.3	15.2	15.1
0.30	16.4	17.8	18.6	19.0	19.2	19.4	19.4	19.3	19.3	19.2	19.0	18.9	18.8	18.6	18.5	18.4	18.2	18.1	18.0	17.9	17.7	17.6	17.5	17.4	17.3	17.2
0.35	17.9	19.4	20.3	20.7	21.0	21.1	21.2	21.1	21.1	21.0	20.9	20.7	20.6	20.5	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4	19.3	19.2
0.40	19.3	20.9	21.8	22.3	22.6	22.8	22.8	22.8	22.7	22.7	22.6	22.5	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	21.2	21.2	21.1
0.45	20.6	22.3	23.2	23.8	24.1	24.3	24.3	24.3	24.3	24.2	24.2	24.1	23.9	23.8	23.7	23.6	23.5	23.4	23.3	23.3	23.2	23.1	23.0	23.0	22.9	22.9
0.50	21.8	23.6	24.6	25.2	25.5	25.7	25.8	25.8	25.8	25.7	25.6	25.6	25.5	25.4	25.3	25.2	25.1	25.0	25.0	24.9	24.8	24.8	24.7	24.7	24.7	24.6
0.55	23.0	24.8	25.8	26.5	26.8	27.0	27.1	27.2	27.2	27.1	27.1	27.0	26.9	26.8	26.8	26.7	26.6	26.6	26.5	26.4	26.4	26.4	26.4	26.3	26.3	26.3
0.60	24.0	25.9	27.0	27.7	28.1	28.3	28.4	28.5	28.5	28.5	28.4	28.4	28.3	28.2	28.2	28.1	28.1	28.0	28.0	28.0	27.9	27.9	27.9	27.9	27.9	28.0
0.65	25.1	27.0	28.2	28.9	29.3	29.5	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.6
0.70	26.0	28.1	29.2	30.0	30.4	30.7	30.8	30.9	31.0	31.0	30.9	30.9	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.9	30.9	31.0	31.1	31.1
0.75	27.0	29.1	30.3	31.0	31.5	31.8	32.0	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.2	32.2	32.2	32.3	32.4	32.5	32.6	32.7
0.80	27.9	30.0	31.3	32.0	32.5	32.9	33.0	33.2	33.2	33.3	33.3	33.3	33.3	33.3	33.3	33.4	33.4	33.4	33.5	33.5	33.6	33.7	33.8	33.9	34.1	34.2
0.85	28.7	30.9	32.2	33.0	33.5	33.9	34.1	34.2	34.3	34.4	34.4	34.5	34.5	34.5	34.6	34.6	34.7	34.8	34.9	35.0	35.1	35.2	35.3	35.5	35.5	35.7
0.90	29.6	31.8	33.1	34.0	34.5	34.9	35.1	35.3	35.4	35.4	35.5	35.6	35.6	35.7	35.7	35.8	35.8	35.9	36.0	36.1	36.3	36.4	36.6	36.8	36.9	37.2
0.95	30.4	32.7	34.0	34.9	35.5	35.8	36.1	36.3	36.4	36.5	36.6	36.6	36.7	36.8	36.8	36.9	37.0	37.1	37.3	37.4	37.6	37.7	37.9	38.1	38.4	38.6
1.00	31.1	33.5	34.9	35.8	36.4	36.8	37.0	37.2	37.4	37.5	37.6	37.7	37.8	37.9	38.0	38.1	38.2	38.3	38.5	38.7	38.8	39.0	39.3	39.5	39.8	40.0

*GI = growth intercept, defined as the average annual height growth (m/year) in t-years above 1.3 m. GI = (total height - 1.3)/(ring count at breast height - 0.5).

In practice, a t-year growth intercept may not be obtained by ring counts, but by measuring the distance between the 1st and the (t+1)th internodes above 1.3 m. For example, a 5-year GI is obtained by measuring the distance between the 1st and the 6th internodes above 1.3 m. A 3-year GI is obtained by measuring the distance between the 1st and the 4th internodes above 1.3 m (see Figure 4 for an illustration). Note that the 1st, 2nd, ···, 6th internodes above 1.3 m correspond to 0.5, 1.5, ···, 5.5 years age above breast height (Age_bh), respectively, which correspond further to t = 0.5, 1.5, ···, 5.5 years of growth above 1.3 m.

Regional versus provincial models: Models developed for a specific subregion (or a group of subregions) should be the best for predictions in that subregion. Therefore, whenever possible, the use of regionalized models is recommended. In cases where the subregion is unknown, or is considered unimportant or irrelevant, the provincial model can be used.

Breast height age (Bhage) is used consistently throughout this study. Conversions among breast height age, stump age and total age can be made using the procedures described in Huang (1994) and Alberta Forest Service (1985).

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APPENDIX 1.

Natural Subegions of Alberta

Natural subregion 1 - Central Mixedwood
Natural subregion 2 - Dry Mixedwood
Natural subregion 3 - Wetland Mixedwood
Natural subregion 4 - Sub-Arctic
Natural subregion 5 - Peace River Lowlands
Natural subregion 6 - Boreal Highlands
Natural subregion 7 - Alpine
Natural subregion 8 - Sub-Alpine
Natural subregion 9 - Montane
Natural subregion 10 - Upper Foothills
Natural subregion 11 - Lower Foothills
Natural subregion 12 - Athabasca Plain
Natural subregion 13 - Kazan Upland
Natural subregion 14 - Foothills Parkland
Natural subregion 15 - Peace River Parkland
Natural subregion 16 - Central Parkland
Natural subregion 17 - Dry Mixedgrass
Natural subregion 18 - Foothills Fescue
Natural subregion 19 - Northern Fescue
Natural subregion 20 - Mixedgrass

APPENDIX 2.

Height and Site Index Prediction Tables for White Spruce

Appendix 2 provides the following tables:

Table A1. White spruce height and site index prediction table in subregions 1 to 6 and 12 to 16.
Table A2. White spruce height and site index prediction table in subregions 7 to 10.
Table A3. White spruce height and site index prediction table in subregion 11.
Table A4. Provincial white spruce height and site index prediction table.
Table A5. White spruce site index prediction table at young ages in subregions 1 to 6 and 12 to 16.
Table A6. White spruce site index prediction table at young ages in subregions 7 to 10.
Table A7. White spruce site index prediction table at young ages in subregion 11.
Table A8. Provincial white spruce site index prediction table at young ages.
Table A9. White spruce average annual height growth in t-years above 1.3 m on different sites.
Table A10. Growth intercept based site index prediction table for white spruce.

Table A1. White spruce height and site index prediction table in subregions 1 to 6 and 12 to 16.

Bhage* (years)	Site index (m) at 50 years Bhage																						
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
2.5	1.35	1.39	1.42	1.46	1.50	1.54	1.59	1.64	1.69	1.75	1.81	1.88	1.95	2.02	2.10	2.18	2.27	2.37	2.46	2.57	2.68	2.79	2.92
3.5	1.36	1.40	1.45	1.49	1.54	1.60	1.65	1.72	1.78	1.85	1.92	2.00	2.09	2.18	2.27	2.37	2.48	2.59	2.71	2.84	2.97	3.11	3.26
4.5	1.38	1.43	1.48	1.53	1.59	1.66	1.72	1.80	1.88	1.96	2.05	2.14	2.24	2.35	2.46	2.58	2.71	2.84	2.98	3.13	3.29	3.45	3.62
5.5	1.39	1.45	1.51	1.58	1.65	1.72	1.80	1.89	1.98	2.07	2.18	2.29	2.41	2.53	2.66	2.80	2.95	3.10	3.27	3.44	3.62	3.81	4.01
6.5	1.41	1.47	1.54	1.62	1.70	1.79	1.88	1.98	2.09	2.20	2.32	2.45	2.58	2.72	2.88	3.04	3.21	3.39	3.57	3.77	3.98	4.20	4.43
7.5	1.42	1.50	1.58	1.67	1.76	1.86	1.97	2.08	2.20	2.33	2.47	2.61	2.77	2.93	3.10	3.29	3.48	3.68	3.90	4.12	4.36	4.60	4.86
8.5	1.44	1.53	1.62	1.72	1.83	1.94	2.06	2.19	2.33	2.47	2.63	2.79	2.97	3.15	3.34	3.55	3.77	4.00	4.23	4.49	4.75	5.03	5.31
9.5	1.46	1.56	1.66	1.77	1.89	2.02	2.16	2.30	2.46	2.62	2.79	2.98	3.17	3.38	3.60	3.83	4.07	4.32	4.59	4.87	5.16	5.47	5.78
10.5	1.48	1.59	1.71	1.83	1.97	2.11	2.26	2.42	2.59	2.78	2.97	3.17	3.39	3.62	3.86	4.11	4.38	4.66	4.95	5.26	5.58	5.92	6.27
11.5	1.50	1.62	1.75	1.89	2.04	2.20	2.37	2.55	2.74	2.94	3.15	3.38	3.62	3.87	4.13	4.41	4.70	5.01	5.33	5.67	6.02	6.39	6.77
12.5	1.52	1.65	1.80	1.96	2.12	2.29	2.48	2.68	2.89	3.11	3.34	3.59	3.85	4.13	4.42	4.72	5.04	5.37	5.72	6.09	6.47	6.86	7.28
13.5	1.54	1.69	1.85	2.02	2.20	2.39	2.60	2.81	3.04	3.28	3.54	3.81	4.09	4.39	4.71	5.04	5.38	5.74	6.12	6.52	6.93	7.35	7.80
14.5	1.56	1.73	1.91	2.09	2.29	2.50	2.72	2.96	3.20	3.47	3.74	4.04	4.34	4.67	5.01	5.36	5.74	6.13	6.53	6.95	7.39	7.85	8.32
15.5	1.59	1.77	1.96	2.16	2.38	2.61	2.85	3.10	3.37	3.66	3.96	4.27	4.60	4.95	5.32	5.70	6.10	6.51	6.95	7.40	7.87	8.35	8.86
16.5	1.61	1.81	2.02	2.24	2.47	2.72	2.98	3.25	3.54	3.85	4.17	4.51	4.87	5.24	5.63	6.04	6.47	6.91	7.37	7.85	8.35	8.86	9.40
17.5	1.64	1.85	2.08	2.32	2.57	2.83	3.11	3.41	3.72	4.05	4.40	4.76	5.14	5.54	5.95	6.39	6.84	7.31	7.80	8.31	8.83	9.38	9.94
18.5	1.67	1.90	2.14	2.40	2.67	2.95	3.25	3.57	3.90	4.26	4.62	5.01	5.42	5.84	6.28	6.74	7.22	7.72	8.24	8.77	9.32	9.90	10.49
19.5	1.69	1.94	2.20	2.48	2.77	3.08	3.40	3.74	4.09	4.47	4.86	5.27	5.70	6.15	6.61	7.10	7.61	8.13	8.67	9.24	9.82	10.42	11.03
20.5	1.72	1.99	2.27	2.57	2.88	3.20	3.54	3.91	4.28	4.68	5.10	5.53	5.99	6.46	6.95	7.46	8.00	8.55	9.12	9.70	10.31	10.94	11.58
21.5	1.75	2.04	2.34	2.65	2.98	3.33	3.70	4.08	4.48	4.90	5.34	5.80	6.28	6.78	7.29	7.83	8.39	8.96	9.56	10.17	10.81	11.46	12.13
22.5	1.79	2.09	2.41	2.74	3.10	3.46	3.85	4.26	4.68	5.12	5.59	6.07	6.57	7.10	7.64	8.20	8.78	9.38	10.01	10.64	11.30	11.98	12.67
23.5	1.82	2.14	2.48	2.84	3.21	3.60	4.01	4.44	4.88	5.35	5.84	6.35	6.87	7.42	7.99	8.57	9.18	9.81	10.45	11.12	11.80	12.50	13.21
24.5	1.85	2.20	2.56	2.93	3.33	3.74	4.17	4.62	5.09	5.58	6.09	6.62	7.18	7.75	8.34	8.95	9.58	10.23	10.90	11.58	12.29	13.01	13.75
25.5	1.89	2.25	2.63	3.03	3.45	3.88	4.34	4.81	5.30	5.82	6.35	6.91	7.48	8.08	8.69	9.33	9.98	10.65	11.34	12.05	12.78	13.52	14.28
26.5	1.92	2.31	2.71	3.13	3.57	4.03	4.50	5.00	5.52	6.05	6.61	7.19	7.79	8.41	9.05	9.70	10.38	11.08	11.79	12.52	13.27	14.03	14.81
27.5	1.96	2.37	2.79	3.23	3.69	4.17	4.67	5.19	5.73	6.29	6.88	7.48	8.10	8.74	9.40	10.08	10.78	11.50	12.23	12.98	13.75	14.54	15.34
28.5	1.99	2.42	2.87	3.34	3.82	4.32	4.85	5.39	5.95	6.54	7.14	7.77	8.41	9.07	9.76	10.46	11.18	11.92	12.67	13.44	14.23	15.03	15.85
29.5	2.03	2.49	2.96	3.44	3.95	4.48	5.02	5.59	6.18	6.78	7.41	8.06	8.72	9.41	10.11	10.84	11.58	12.34	13.11	13.90	14.71	15.53	16.36
30.5	2.07	2.55	3.04	3.55	4.08	4.63	5.20	5.79	6.40	7.03	7.68	8.35	9.04	9.75	10.47	11.21	11.97	12.75	13.54	14.35	15.18	16.01	16.86
31.5	2.11	2.61	3.13	3.66	4.22	4.79	5.38	6.00	6.63	7.28	7.95	8.64	9.35	10.08	10.83	11.59	12.37	13.16	13.98	14.80	15.64	16.49	17.36
32.5	2.15	2.68	3.22	3.77	4.35	4.95	5.57	6.20	6.86	7.53	8.23	8.94	9.67	10.42	11.18	11.96	12.76	13.57	14.40	15.24	16.10	16.97	17.85
33.5	2.19	2.74	3.31	3.89	4.49	5.11	5.75	6.41	7.09	7.78	8.50	9.23	9.98	10.75	11.54	12.34	13.15	13.98	14.83	15.68	16.55	17.43	18.33
34.5	2.24	2.81	3.40	4.01	4.63	5.28	5.94	6.62	7.32	8.04	8.77	9.53	10.30	11.09	11.89	12.71	13.54	14.38	15.24	16.11	17.00	17.89	18.80
35.5	2.28	2.88	3.49	4.12	4.77	5.44	6.13	6.83	7.55	8.29	9.05	9.82	10.61	11.42	12.24	13.07	13.92	14.78	15.66	16.54	17.44	18.34	19.26
36.5	2.32	2.95	3.59	4.24	4.92	5.61	6.32	7.04	7.79	8.55	9.33	10.12	10.93	11.75	12.59	13.44	14.30	15.18	16.06	16.96	17.87	18.79	19.71
37.5	2.37	3.02	3.68	4.36	5.06	5.78	6.51	7.26	8.02	8.81	9.60	10.41	11.24	12.08	12.93	13.80	14.68	15.57	16.47	17.38	18.30	19.22	20.16
38.5	2.41	3.09	3.78	4.49	5.21	5.95	6.70	7.48	8.26	9.06	9.88	10.71	11.55	12.41	13.28	14.16	15.05	15.95	16.86	17.79	18.71	19.65	20.60
39.5	2.46	3.16	3.88	4.61	5.36	6.12	6.90	7.69	8.50	9.32	10.15	11.00	11.86	12.74	13.62	14.51	15.42	16.33	17.26	18.19	19.13	20.07	21.03
40.5	2.51	3.24	3.98	4.74	5.51	6.30	7.10	7.91	8.74	9.58	10.43	11.30	12.17	13.06	13.96	14.87	15.78	16.71	17.64	18.58	19.53	20.48	21.44
41.5	2.56	3.31	4.08	4.87	5.66	6.47	7.29	8.13	8.98	9.83	10.71	11.59	12.48	13.38	14.29	15.21	16.14	17.08	18.02	18.97	19.93	20.89	21.86
42.5	2.61	3.39	4.19	4.99	5.81	6.65	7.49	8.35	9.21	10.09	10.98	11.88	12.78	13.70	14.62	15.56	16.50	17.44	18.39	19.35	20.32	21.28	22.26
43.5	2.66	3.47	4.29	5.12	5.97	6.82	7.69	8.57	9.45	10.35	11.25	12.17	13.09	14.02	14.95	15.90	16.85	17.80	18.76	19.73	20.70	21.67	22.65
44.5	2.71	3.55	4.40	5.26	6.13	7.00	7.89	8.79	9.69	10.60	11.53	12.45	13.39	14.33	15.28	16.23	17.19	18.15	19.12	20.10	21.07	22.05	23.04
45.5	2.76	3.63	4.50	5.39	6.28	7.18	8.09	9.01	9.93	10.86	11.80	12.74	13.69	14.64	15.60	16.56	17.53	18.50	19.48	20.46	21.44	22.42	23.41
46.5	2.81	3.71	4.61	5.52	6.44	7.36	8.29	9.23	10.17	11.12	12.07	13.02	13.98	14.95	15.92	16.89	17.87	18.85	19.83	20.81	21.80	22.79	23.78
47.5	2.86	3.79	4.72	5.66	6.60	7.54	8.49	9.45	10.41	11.37	12.34	13.31	14.28	15.25	16.23	17.21	18.20	19.18	20.17	21.16	22.15	23.14	24.14
48.5	2.92	3.87	4.83	5.79	6.76	7.73	8.70	9.67	10.64	11.62	12.60	13.58	14.57	15.55	16.54	17.53	18.52	19.51	20.51	21.50	22.50	23.49	24.49
49.5	2.97	3.96	4.94	5.93	6.92	7.91	8.90	9.89	10.88	11.87	12.87	13.86	14.86	15.85	16.85	17.84	18.84	19.84	20.84	21.84	22.83	23.83	24.83
50.5	3.03	4.04	5.06	6.07	7.08	8.09	9.10	10.11	11.12	12.13	13.13	14.14	15.14	16.15	17.15	18.15	19.16	20.16	21.16	22.16	23.16	24.17	25.17
51.5	3.08	4.13	5.17	6.21	7.24	8.28	9.30	10.33	11.35	12.37	13.39	14.41	15.42	16.44	17.45	18.46	19.47	20.47	21.48	22.48	23.49	24.49	25.49
52.5	3.14	4.22	5.28	6.35	7.41	8.46	9.51	10.55	11.59	12.62	13.65	14.68	15.70	16.72	17.74	18.76	19.77	20.78	21.79	22.80	23.80	24.81	25.81
53.5	3.20	4.30	5.40	6.49	7.57	8.64	9.71	10.77	11.82	12.87	13.91	14.95	15.98	17.01	18.03	19.05	20.07	21.09	22.10	23.11	24.11	25.12	26.12
54.5	3.26	4.39	5.52	6.63	7.73	8.83	9.91	10.99	12.05	13.11	14.17	15.21	16.25	17.29	18.32	19.34	20.36	21.38	22.40	23.41	24.42	25.42	26.43
55.5	3.31	4.48	5.63	6.77	7.90	9.01	10.11	11.20	12.29	13.36	14.42	15.48	16.52	17.56	18.60	19.63	20.65	21.67	22.69	23.70	24.71	25.72	26.73
56.5	3.37	4.57	5.75	6.92	8.06	9.20	10.32	11.42	12.52	13.60	14.67	15.73	16.79	17.84	18.88	19.91	20.94	21.96	22.98	23.99	25.00	26.01	27.02
57.5	3.43	4.66	5.87	7.06	8.23	9.38	10.52	11.64	12.75	13.84	14.92	15.99	17.05	18.11	19.15	20.19	21.22	22.24	23.26	24.28	25.29	26.29	27.30
58.5	3.50	4.75	5.99	7.20	8.39	9.57	10.72	11.85	12.97	14.08	15.17	16.25	17.31	18.37	19.42	20.46	21.49	22.52	23.54	24.55	25.56	26.57	27.57
59.5	3.56	4.85	6.11	7.35	8.56	9.75	10.92	12.07	13.20	14.31	15.41	16.50	17.57	18.63	19.68	20.73	21.76	22.79	23.81	24.83	25.84	26.84	27.84
60.5	3.62	4.94	6.23	7.49	8.73	9.94	11.12	12.28	13.42	14.55	15.65	16.75	17.82	18.89	19.94	20.99	22.02	23.05	24.08	25.09	26.10	27.11	28.11
61.5	3.68	5.03	6.35	7.64	8.89	10.12	11.32	12.49	13.65	14.78	15.89	16.99	18.07	19.14	20.20	21.25	22.28	23.31	24.34	25.35	26.36	27.36	28.36
62.5	3.75	5.13	6.48	7.78	9.06	10.30	11.52	12.71	13.87	15.01	16.13	17.23	18.32	19.39	20.45	21.50	22.54	23.57	24.59	25.60	26.61	27.62	28.61
63.5	3.81	5.22	6.60	7.93	9.23	10.49	11.72	12.92	14.09	15.24	16.36	17.47	18.56	19.64	20.70	21.75	22.79	23.82	24.84	25.85	26.86	27.86	28.86
64.5	3.87	5.32	6.72	8.08	9.39	10.67	11.91	13.12	14.31	15.46	16.60	17.71	18.80	19.88	20.94	21.99	23.03	24.06	25.08	26.10	27.10	28.10	29.10
65.5	3.94	5.42	6.85	8.22	9.56	10.85	12.11	13.33	14.52	15.69	16.83	17.94	19.04	20.12	21.18	22.24	23.27	24.30	25.32	26.33	27.34	28.34	29.33
66.5	4.00	5.51	6.97	8.37	9.73	11.04	12.31	13.54	14.74	15.91	17.05	18.17	19.27	20.35	21.42	22.47	23.51	24.54	25.56	26.57	27.57	28.57	29.56
67.5	4.07	5.61	7.09	8.52	9.89	11.22	12.50	13.74	14.95	16.13	17.28	18.40	19.50	20.59	21.65	22.70	23.74	24.77	25.79	26.80	27.80	28.79	29.78
68.5	4.14	5.71	7.22	8.67	10.06	11.40	12.69	13.95	15.16	16.34	17.50	18.62	19.73	20.81	21.88	22.93	23.97	25.00	26.01	27.02	28.02	29.01	30.00
69.5	4.20	5.81	7.35	8.82	10.23	11.58	12.89	14.15	15.37	16.56	17.72	18.85	19.95	21.04	22.10	23.16	24.19	25.22	26.23	27.24	28.23	29.22	30.21
70.5	4.27	5.91	7.47	8.96	10.39	11.76	13.08	14.35	15.58	16.77	17.93	19.06	20.17	21.26	22.32	23.38	24.41	25.43	26.45	27.45	28.44	29.43	30.41
71.5	4.34	6.01	7.60	9.11	10.56	11.94	13.27	14.55	15.78	16.98	18.15	19.28	20.39	21.47	22.54	23.59	24.63	25.65	26.66	27.66	28.65	29.64	30.61
72.5	4.41	6.11	7.73	9.26	10.72	12.12	13.46	14.75	15.99	17.19	18.36	19.49	20.60	21.69	22.75	23.80	24.84	25.86	26.86	27.86	28.85	29.83	30.81
73.5	4.48	6.21	7.85	9.41	10.89	12.30	13.65	14.94	16.19	17.40	18.56	19.70	20.81	21.90	22.96	24.01	25.04	26.06	27.07	28.06	29.05	30.03	31.00
74.5	4.55	6.31	7.98	9.56	11.05	12.47	13.83	15.14	16.39	17.60	18.77	19.91	21.02	22.10	23.17	24.21	25.24	26.26	27.26	28.26	29.24	30.22	31.19
75.5	4.62	6.42	8.11	9.70	11.22	12.65	14.02	15.33	16.59	17.80	18.97	20.11	21.22	22.31	23.37	24.41	25.44	26.46	27.46	28.45	29.43	30.40	31.37
76.5	4.69	6.52	8.24	9.85	11.38	12.83	14.20	15.52	16.78	18.00	19.17	20.31	21.42	22.51	23.57	24.61	25.64	26.65	27.65	28.63	29.61	30.59	31.55
77.5	4.76	6.62	8.36	10.00	11.54	13.00	14.39	15.71	16.98	18.19	19.37	20.51	21.62	22.70	23.76	24.80	25.83	26.84	27.83	28.82	29.79	30.76	31.73
78.5	4.83	6.72	8.49	10.15	11.70	13.17	14.57	15.90	17.17	18.39	19.57	20.71	21.82	22.90	23.96	24.99	26.01	27.02	28.01	29.00	29.97	30.94	31.90
79.5	4.91	6.83	8.62	10.29	11.87	13.35	14.75	16.08	17.36	18.58	19.76	20.90	22.01	23.09	24.14	25.18	26.20	27.20	28.19	29.17	30.14	31.11	32.06
80.5	4.98	6.93	8.75	10.44	12.03	13.52	14.93	16.27	17.55	18.77	19.95	21.09	22.20	23.27	24.33	25.36	26.38	27.38	28.37	29.34	30.31	31.27	32.23
81.5	5.05	7.04	8.88	10.59	12.19	13.69	15.11	16.45	17.73	18.96	20.14	21.28	22.38	23.46	24.51	25.54	26.55	27.55	28.54	29.51	30.48	31.43	32.38
82.5	5.13	7.14	9.01	10.74	12.35	13.86	15.28	16.63	17.91	19.14	20.32	21.46	22.56	23.64	24.69	25.72	26.73	27.72	28.70	29.67	30.64	31.59	32.54
83.5	5.20	7.25	9.13	10.88	12.51	14.03	15.46	16.81	18.10	19.32	20.50	21.64	22.74	23.82	24.86	25.89	26.90	27.89	28.87	29.84	30.79	31.75	32.69
84.5	5.27	7.35	9.26	11.03	12.67	14.20	15.63	16.99	18.28	19.50	20.68	21.82	22.92	23.99	25.04	26.06	27.06	28.05	29.03	29.99	30.95	31.90	32.84
85.5	5.35	7.46	9.39	11.17	12.83	14.36	15.81	17.17	18.45	19.68	20.86	22.00	23.09	24.16	25.20	26.22	27.23	28.21	29.18	30.15	31.10	32.04	32.98
86.5	5.42	7.56	9.52	11.32	12.98	14.53	15.98	17.34	18.63	19.86	21.04	22.17	23.27	24.33	25.37	26.39	27.39	28.37	29.34	30.30	31.25	32.19	33.13
87.5	5.50	7.67	9.65	11.47	13.14	14.70	16.15	17.51	18.80	20.03	21.21	22.34	23.43	24.50	25.53	26.55	27.54	28.52	29.49	30.44	31.39	32.33	33.26
88.5	5.58	7.78	9.78	11.61	13.30	14.86	16.32	17.68	18.98	20.20	21.38	22.51	23.60	24.66	25.69	26.70	27.70	28.67	29.64	30.59	31.53	32.47	33.40
89.5	5.65	7.88	9.91	11.75	13.45	15.02	16.48	17.85	19.14	20.37	21.55	22.67	23.76	24.82	25.85	26.86	27.85	28.82	29.78	30.73	31.67	32.60	33.53

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A1. White spruce height and site index prediction table in subregions 1 to 6 and 12 to 16 (continued).

Bhage*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
90.5	5.73	7.99	10.04	11.90	13.61	15.18	16.65	18.02	19.31	20.54	21.71	22.84	23.92	24.98	26.01	27.01	28.00	28.97	29.92	30.87	31.81	32.74	33.66
91.5	5.81	8.10	10.16	12.04	13.76	15.34	16.81	18.19	19.48	20.70	21.87	23.00	24.08	25.13	26.16	27.16	28.14	29.11	30.06	31.00	31.94	32.86	33.79
92.5	5.88	8.20	10.29	12.19	13.91	15.50	16.97	18.35	19.64	20.87	22.04	23.16	24.24	25.29	26.31	27.30	28.28	29.25	30.20	31.14	32.07	32.99	33.91
93.5	5.96	8.31	10.42	12.33	14.07	15.66	17.14	18.51	19.80	21.03	22.19	23.31	24.39	25.44	26.45	27.45	28.42	29.38	30.33	31.27	32.19	33.12	34.03
94.5	6.04	8.42	10.55	12.47	14.22	15.82	17.29	18.67	19.96	21.19	22.35	23.47	24.54	25.58	26.60	27.59	28.56	29.52	30.46	31.39	32.32	33.24	34.15
95.5	6.12	8.53	10.68	12.61	14.37	15.97	17.45	18.83	20.12	21.34	22.50	23.62	24.69	25.73	26.74	27.73	28.69	29.65	30.59	31.52	32.44	33.35	34.26
96.5	6.20	8.63	10.80	12.75	14.52	16.13	17.61	18.99	20.28	21.50	22.66	23.77	24.83	25.87	26.88	27.86	28.83	29.78	30.71	31.64	32.56	33.47	34.38
97.5	6.27	8.74	10.93	12.89	14.66	16.28	17.76	19.14	20.43	21.65	22.81	23.91	24.98	26.01	27.01	27.99	28.96	29.90	30.84	31.76	32.68	33.58	34.49
98.5	6.35	8.85	11.06	13.03	14.81	16.43	17.92	19.30	20.59	21.80	22.95	24.06	25.12	26.15	27.15	28.12	29.08	30.03	30.96	31.88	32.79	33.70	34.60
99.5	6.43	8.96	11.18	13.17	14.96	16.58	18.07	19.45	20.74	21.95	23.10	24.20	25.26	26.28	27.28	28.25	29.21	30.15	31.07	31.99	32.90	33.80	34.70
100.5	6.51	9.06	11.31	13.31	15.10	16.73	18.22	19.60	20.88	22.09	23.24	24.34	25.39	26.41	27.41	28.38	29.33	30.27	31.19	32.10	33.01	33.91	34.81
101.5	6.59	9.17	11.44	13.45	15.25	16.88	18.37	19.75	21.03	22.24	23.38	24.48	25.53	26.55	27.53	28.50	29.45	30.38	31.30	32.21	33.12	34.02	34.91
102.5	6.67	9.28	11.56	13.59	15.39	17.03	18.52	19.89	21.18	22.38	23.52	24.61	25.66	26.67	27.66	28.62	29.57	30.50	31.41	32.32	33.22	34.12	35.01
103.5	6.75	9.39	11.69	13.72	15.54	17.17	18.67	20.04	21.32	22.52	23.66	24.75	25.79	26.80	27.78	28.74	29.68	30.61	31.52	32.43	33.33	34.22	35.10
104.5	6.83	9.49	11.81	13.86	15.68	17.32	18.81	20.18	21.46	22.66	23.79	24.88	25.92	26.92	27.90	28.86	29.80	30.72	31.63	32.53	33.43	34.32	35.20
105.5	6.92	9.60	11.94	13.99	15.82	17.46	18.95	20.33	21.60	22.80	23.93	25.01	26.04	27.05	28.02	28.97	29.91	30.83	31.74	32.63	33.53	34.41	35.29
106.5	7.00	9.71	12.06	14.13	15.96	17.60	19.10	20.47	21.74	22.93	24.06	25.13	26.17	27.17	28.14	29.09	30.02	30.93	31.84	32.73	33.62	34.51	35.39
107.5	7.08	9.82	12.19	14.26	16.10	17.74	19.24	20.61	21.88	23.06	24.19	25.26	26.29	27.28	28.25	29.20	30.12	31.04	31.94	32.83	33.72	34.60	35.47
108.5	7.16	9.93	12.31	14.40	16.24	17.88	19.38	20.74	22.01	23.20	24.32	25.38	26.41	27.40	28.36	29.31	30.23	31.14	32.04	32.93	33.81	34.69	35.56
109.5	7.24	10.03	12.44	14.53	16.37	18.02	19.51	20.88	22.14	23.32	24.44	25.51	26.53	27.51	28.47	29.41	30.33	31.24	32.13	33.02	33.90	34.78	35.65
110.5	7.32	10.14	12.56	14.66	16.51	18.16	19.65	21.01	22.27	23.45	24.57	25.63	26.64	27.63	28.58	29.52	30.43	31.34	32.23	33.11	33.99	34.86	35.73
111.5	7.40	10.25	12.68	14.79	16.65	18.30	19.79	21.15	22.40	23.58	24.69	25.74	26.76	27.74	28.69	29.62	30.53	31.43	32.32	33.20	34.08	34.95	35.82
112.5	7.49	10.36	12.81	14.92	16.78	18.43	19.92	21.28	22.53	23.70	24.81	25.86	26.87	27.85	28.80	29.72	30.63	31.53	32.41	33.29	34.16	35.03	35.90
113.5	7.57	10.46	12.93	15.05	16.91	18.57	20.05	21.41	22.66	23.83	24.93	25.98	26.98	27.95	28.90	29.82	30.73	31.62	32.50	33.38	34.25	35.11	35.98
114.5	7.65	10.57	13.05	15.18	17.05	18.70	20.18	21.53	22.78	23.95	25.04	26.09	27.09	28.06	29.00	29.92	30.82	31.71	32.59	33.47	34.33	35.19	36.05
115.5	7.73	10.68	13.17	15.31	17.18	18.83	20.31	21.66	22.91	24.07	25.16	26.20	27.20	28.16	29.10	30.02	30.92	31.80	32.68	33.55	34.41	35.27	36.13
116.5	7.82	10.78	13.29	15.44	17.31	18.96	20.44	21.79	23.03	24.18	25.27	26.31	27.30	28.26	29.20	30.11	31.01	31.89	32.76	33.63	34.49	35.35	36.20
117.5	7.90	10.89	13.41	15.57	17.44	19.09	20.57	21.91	23.15	24.30	25.38	26.42	27.41	28.36	29.29	30.20	31.10	31.98	32.85	33.71	34.57	35.43	36.28
118.5	7.98	11.00	13.53	15.69	17.57	19.22	20.69	22.03	23.27	24.41	25.49	26.52	27.51	28.46	29.39	30.29	31.18	32.06	32.93	33.79	34.65	35.50	36.35
119.5	8.07	11.10	13.65	15.82	17.69	19.34	20.82	22.15	23.38	24.53	25.60	26.63	27.61	28.56	29.48	30.38	31.27	32.15	33.01	33.87	34.72	35.57	36.42
120.5	8.15	11.21	13.77	15.94	17.82	19.47	20.94	22.27	23.50	24.64	25.71	26.73	27.71	28.65	29.57	30.47	31.36	32.23	33.09	33.95	34.80	35.64	36.49
121.5	8.23	11.32	13.89	16.07	17.94	19.59	21.06	22.39	23.61	24.75	25.82	26.83	27.81	28.75	29.66	30.56	31.44	32.31	33.17	34.02	34.87	35.71	36.56
122.5	8.31	11.42	14.00	16.19	18.07	19.71	21.18	22.51	23.72	24.86	25.92	26.93	27.90	28.84	29.75	30.64	31.52	32.39	33.24	34.09	34.94	35.78	36.62
123.5	8.40	11.53	14.12	16.31	18.19	19.84	21.30	22.62	23.84	24.96	26.02	27.03	28.00	28.93	29.84	30.73	31.60	32.46	33.32	34.17	35.01	35.85	36.69
124.5	8.48	11.63	14.24	16.43	18.31	19.96	21.42	22.74	23.95	25.07	26.12	27.13	28.09	29.02	29.92	30.81	31.68	32.54	33.39	34.24	35.08	35.92	36.75
125.5	8.57	11.74	14.36	16.55	18.44	20.08	21.53	22.85	24.05	25.17	26.22	27.22	28.18	29.11	30.01	30.89	31.76	32.62	33.46	34.31	35.14	35.98	36.82
126.5	8.65	11.84	14.47	16.67	18.56	20.20	21.65	22.96	24.16	25.27	26.32	27.32	28.27	29.19	30.09	30.97	31.84	32.69	33.53	34.37	35.21	36.04	36.88
127.5	8.73	11.95	14.59	16.79	18.68	20.31	21.76	23.07	24.27	25.38	26.42	27.41	28.36	29.28	30.17	31.05	31.91	32.76	33.60	34.44	35.28	36.11	36.94
128.5	8.82	12.05	14.70	16.91	18.79	20.43	21.88	23.18	24.37	25.48	26.51	27.50	28.45	29.36	30.25	31.13	31.98	32.83	33.67	34.51	35.34	36.17	37.00
129.5	8.90	12.16	14.82	17.03	18.91	20.54	21.99	23.29	24.47	25.57	26.61	27.59	28.53	29.45	30.33	31.20	32.06	32.90	33.74	34.57	35.40	36.23	37.05
130.5	8.98	12.26	14.93	17.15	19.03	20.66	22.10	23.39	24.57	25.67	26.70	27.68	28.62	29.53	30.41	31.28	32.13	32.97	33.81	34.64	35.46	36.29	37.11
131.5	9.07	12.37	15.04	17.26	19.14	20.77	22.21	23.50	24.68	25.77	26.79	27.77	28.70	29.61	30.49	31.35	32.20	33.04	33.87	34.70	35.52	36.35	37.17
132.5	9.15	12.47	15.15	17.38	19.26	20.88	22.31	23.60	24.77	25.86	26.88	27.85	28.78	29.68	30.56	31.42	32.27	33.11	33.93	34.76	35.58	36.40	37.22
133.5	9.24	12.57	15.27	17.49	19.37	20.99	22.42	23.70	24.87	25.96	26.97	27.94	28.87	29.76	30.64	31.49	32.34	33.17	34.00	34.82	35.64	36.46	37.28
134.5	9.32	12.68	15.38	17.60	19.48	21.10	22.53	23.80	24.97	26.05	27.06	28.02	28.95	29.84	30.71	31.56	32.40	33.23	34.06	34.88	35.70	36.51	37.33
135.5	9.40	12.78	15.49	17.72	19.59	21.21	22.63	23.90	25.06	26.14	27.15	28.10	29.02	29.91	30.78	31.63	32.47	33.30	34.12	34.94	35.75	36.57	37.38
136.5	9.49	12.88	15.60	17.83	19.71	21.32	22.73	24.00	25.16	26.23	27.23	28.19	29.10	29.99	30.85	31.70	32.53	33.36	34.18	35.00	35.81	36.62	37.43
137.5	9.57	12.98	15.71	17.94	19.82	21.42	22.84	24.10	25.25	26.32	27.32	28.27	29.18	30.06	30.92	31.77	32.60	33.42	34.24	35.05	35.86	36.67	37.49
138.5	9.66	13.09	15.82	18.05	19.92	21.53	22.94	24.20	25.34	26.40	27.40	28.34	29.25	30.13	30.99	31.83	32.66	33.48	34.30	35.11	35.92	36.73	37.53
139.5	9.74	13.19	15.93	18.16	20.03	21.63	23.04	24.29	25.43	26.49	27.48	28.42	29.33	30.20	31.06	31.89	32.72	33.54	34.35	35.16	35.97	36.78	37.58
140.5	9.82	13.29	16.03	18.27	20.14	21.74	23.14	24.39	25.52	26.57	27.56	28.50	29.40	30.27	31.12	31.96	32.78	33.60	34.41	35.22	36.02	36.83	37.63
141.5	9.91	13.39	16.14	18.38	20.24	21.84	23.23	24.48	25.61	26.66	27.64	28.57	29.47	30.34	31.19	32.02	32.84	33.65	34.46	35.27	36.07	36.87	37.68
142.5	9.99	13.49	16.25	18.49	20.35	21.94	23.33	24.57	25.70	26.74	27.72	28.65	29.54	30.41	31.25	32.08	32.90	33.71	34.52	35.32	36.12	36.92	37.72
143.5	10.07	13.59	16.35	18.59	20.45	22.04	23.43	24.66	25.78	26.82	27.80	28.72	29.61	30.47	31.32	32.14	32.96	33.77	34.57	35.37	36.17	36.97	37.77
144.5	10.16	13.69	16.46	18.70	20.56	22.14	23.52	24.75	25.87	26.90	27.87	28.80	29.68	30.54	31.38	32.20	33.01	33.82	34.62	35.42	36.22	37.02	37.81
145.5	10.24	13.79	16.57	18.80	20.66	22.24	23.61	24.84	25.95	26.98	27.95	28.87	29.75	30.60	31.44	32.26	33.07	33.87	34.67	35.47	36.27	37.06	37.86
146.5	10.33	13.89	16.67	18.91	20.76	22.34	23.71	24.93	26.04	27.06	28.02	28.94	29.82	30.67	31.50	32.32	33.13	33.93	34.72	35.52	36.31	37.11	37.90
147.5	10.41	13.99	16.77	19.01	20.86	22.43	23.80	25.01	26.12	27.14	28.10	29.01	29.88	30.73	31.56	32.37	33.18	33.98	34.77	35.57	36.36	37.15	37.94
148.5	10.49	14.09	16.88	19.11	20.96	22.53	23.89	25.10	26.20	27.22	28.17	29.07	29.95	30.79	31.62	32.43	33.23	34.03	34.82	35.61	36.40	37.19	37.99
149.5	10.58	14.18	16.98	19.22	21.06	22.62	23.98	25.18	26.28	27.29	28.24	29.14	30.01	30.85	31.68	32.49	33.29	34.08	34.87	35.66	36.45	37.24	38.03
150.5	10.66	14.28	17.08	19.32	21.16	22.72	24.07	25.27	26.36	27.37	28.31	29.21	30.07	30.91	31.73	32.54	33.34	34.13	34.92	35.70	36.49	37.28	38.07
151.5	10.74	14.38	17.18	19.42	21.25	22.81	24.15	25.35	26.44	27.44	28.38	29.27	30.14	30.97	31.79	32.59	33.39	34.18	34.96	35.75	36.53	37.32	38.11
152.5	10.83	14.48	17.28	19.52	21.35	22.90	24.24	25.43	26.51	27.51	28.45	29.34	30.20	31.03	31.84	32.65	33.44	34.23	35.01	35.79	36.58	37.36	38.15
153.5	10.91	14.57	17.39	19.62	21.45	22.99	24.33	25.51	26.59	27.58	28.52	29.40	30.26	31.09	31.90	32.70	33.49	34.27	35.05	35.84	36.62	37.40	38.19
154.5	10.99	14.67	17.48	19.72	21.54	23.08	24.41	25.59	26.66	27.65	28.58	29.47	30.32	31.14	31.95	32.75	33.54	34.32	35.10	35.88	36.66	37.44	38.22
155.5	11.08	14.77	17.58	19.81	21.63	23.17	24.50	25.67	26.74	27.72	28.65	29.53	30.38	31.20	32.00	32.80	33.58	34.36	35.14	35.92	36.70	37.48	38.26
156.5	11.16	14.86	17.68	19.91	21.73	23.26	24.58	25.75	26.81	27.79	28.71	29.59	30.43	31.25	32.06	32.85	33.63	34.41	35.19	35.96	36.74	37.52	38.30
157.5	11.24	14.96	17.78	20.01	21.82	23.34	24.66	25.83	26.88	27.86	28.78	29.65	30.49	31.31	32.11	32.90	33.68	34.45	35.23	36.00	36.78	37.55	38.33
158.5	11.32	15.05	17.88	20.10	21.91	23.43	24.74	25.90	26.96	27.93	28.84	29.71	30.55	31.36	32.16	32.94	33.72	34.50	35.27	36.04	36.82	37.59	38.37
159.5	11.41	15.15	17.97	20.20	22.00	23.51	24.82	25.98	27.03	27.99	28.90	29.77	30.60	31.41	32.21	32.99	33.77	34.54	35.31	36.08	36.85	37.63	38.40
160.5	11.49	15.24	18.07	20.29	22.09	23.60	24.90	26.05	27.10	28.06	28.96	29.83	30.66	31.46	32.26	33.04	33.81	34.58	35.35	36.12	36.89	37.66	38.44
161.5	11.57	15.34	18.17	20.38	22.18	23.68	24.98	26.13	27.16	28.12	29.02	29.88	30.71	31.52	32.31	33.08	33.86	34.62	35.39	36.16	36.93	37.70	38.47
162.5	11.65	15.43	18.26	20.47	22.27	23.77	25.06	26.20	27.23	28.19	29.08	29.94	30.76	31.57	32.35	33.13	33.90	34.67	35.43	36.20	36.96	37.73	38.50
163.5	11.73	15.52	18.36	20.57	22.35	23.85	25.13	26.27	27.30	28.25	29.14	29.99	30.82	31.62	32.40	33.17	33.94	34.71	35.47	36.23	37.00	37.77	38.54
164.5	11.82	15.61	18.45	20.66	22.44	23.93	25.21	26.34	27.37	28.31	29.20	30.05	30.87	31.66	32.45	33.22	33.98	34.75	35.51	36.27	37.03	37.80	38.57
165.5	11.90	15.71	18.54	20.75	22.53	24.01	25.28	26.41	27.43	28.37	29.26	30.10	30.92	31.71	32.49	33.26	34.03	34.79	35.55	36.31	37.07	37.83	38.60
166.5	11.98	15.80	18.64	20.84	22.61	24.09	25.36	26.48	27.50	28.43	29.32	30.16	30.97	31.76	32.54	33.30	34.07	34.82	35.58	36.34	37.10	37.87	38.63
167.5	12.06	15.89	18.73	20.93	22.69	24.17	25.43	26.55	27.56	28.49	29.37	30.21	31.02	31.81	32.58	33.35	34.11	34.86	35.62	36.38	37.13	37.90	38.66
168.5	12.14	15.98	18.82	21.01	22.78	24.25	25.51	26.62	27.62	28.55	29.43	30.26	31.07	31.85	32.62	33.39	34.15	34.90	35.65	36.41	37.17	37.93	38.69
169.5	12.22	16.07	18.91	21.10	22.86	24.32	25.58	26.68	27.69	28.61	29.48	30.31	31.12	31.90	32.67	33.43	34.18	34.94	35.69	36.44	37.20	37.96	38.72
170.5	12.31	16.16	19.00	21.19	22.94	24.40	25.65	26.75	27.75	28.67	29.54	30.36	31.16	31.94	32.71	33.47	34.22	34.97	35.72	36.48	37.23	37.99	38.75
171.5	12.39	16.25	19.09	21.27	23.02	24.47	25.72	26.82	27.81	28.73	29.59	30.41	31.21	31.99	32.75	33.51	34.26	35.01	35.76	36.51	37.26	38.02	38.78
172.5	12.47	16.34	19.18	21.36	23.10	24.55	25.79	26.88	27.87	28.78	29.64	30.46	31.26	32.03	32.79	33.55	34.30	35.05	35.79	36.54	37.29	38.05	38.81
173.5	12.55	16.43	19.27	21.44	23.18	24.62	25.86	26.94	27.93	28.84	29.69	30.51	31.30	32.08	32.83	33.59	34.33	35.08	35.83	36.57	37.33	38.08	38.84
174.5	12.63	16.52	19.36	21.53	23.26	24.70	25.93	27.01	27.99	28.89	29.75	30.56	31.35	32.12	32.88	33.62	34.37	35.11	35.86	36.61	37.36	38.11	38.87
175.5	12.71	16.61	19.44	21.61	23.34	24.77	25.99	27.07	28.05	28.95	29.80	30.61	31.39	32.16	32.91	33.66	34.41	35.15	35.89	36.64	37.38	38.14	38.89
176.5	12.79	16.69	19.53	21.69	23.42	24.84	26.06	27.13	28.10	29.00	29.85	30.65	31.44	32.20	32.95	33.70	34.44	35.18	35.92	36.67	37.41	38.17	38.92
177.5	12.87	16.78	19.62	21.78	23.49	24.91	26.13	27.19	28.16	29.05	29.90	30.70	31.48	32.24	32.99	33.74	34.48	35.22	35.95	36.70	37.44	38.19	38.95
178.5	12.95	16.87	19.70	21.86	23.57	24.98	26.19	27.25	28.22	29.11	29.94	30.75	31.52	32.28	33.03	33.77	34.51	35.25	35.99	36.73	37.47	38.22	38.97
179.5	13.03	16.95	19.79	21.94	23.65	25.05	26.26	27.31	28.27	29.16	29.99	30.79	31.57	32.32	33.07	33.81	34.54	35.28	36.02	36.76	37.50	38.25	39.00

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A2. White spruce height and site index prediction table in subregions 7 to 10.

Bhage*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
2.5	1.36	1.40	1.45	1.50	1.55	1.60	1.66	1.72	1.78	1.85	1.92	2.00	2.08	2.17	2.25	2.35	2.45	2.55	2.65	2.77	2.88	3.00	3.13
3.5	1.37	1.42	1.47	1.53	1.59	1.65	1.72	1.79	1.87	1.95	2.03	2.12	2.22	2.32	2.42	2.53	2.65	2.76	2.89	3.02	3.16	3.30	3.44
4.5	1.39	1.44	1.50	1.57	1.64	1.71	1.79	1.87	1.96	2.06	2.15	2.26	2.37	2.48	2.60	2.73	2.86	3.00	3.14	3.29	3.45	3.61	3.78
5.5	1.40	1.47	1.54	1.61	1.69	1.77	1.86	1.96	2.06	2.17	2.28	2.40	2.53	2.66	2.80	2.94	3.09	3.25	3.41	3.58	3.76	3.95	4.14
6.5	1.41	1.49	1.57	1.65	1.74	1.84	1.94	2.05	2.17	2.29	2.42	2.55	2.70	2.85	3.00	3.16	3.33	3.51	3.70	3.89	4.09	4.30	4.52
7.5	1.43	1.51	1.60	1.70	1.80	1.91	2.03	2.15	2.28	2.42	2.56	2.72	2.88	3.04	3.22	3.40	3.59	3.79	4.00	4.22	4.44	4.67	4.91
8.5	1.45	1.54	1.64	1.75	1.87	1.99	2.12	2.26	2.40	2.56	2.72	2.89	3.07	3.25	3.45	3.65	3.86	4.09	4.32	4.55	4.80	5.06	5.33
9.5	1.46	1.57	1.68	1.80	1.93	2.07	2.21	2.37	2.53	2.70	2.88	3.07	3.27	3.47	3.69	3.91	4.15	4.39	4.65	4.91	5.18	5.47	5.76
10.5	1.48	1.60	1.73	1.86	2.00	2.15	2.32	2.48	2.66	2.85	3.05	3.26	3.47	3.70	3.94	4.19	4.44	4.71	4.99	5.28	5.58	5.89	6.21
11.5	1.50	1.63	1.77	1.92	2.08	2.24	2.42	2.61	2.80	3.01	3.23	3.45	3.69	3.94	4.20	4.47	4.75	5.04	5.34	5.66	5.98	6.32	6.67
12.5	1.52	1.67	1.82	1.98	2.15	2.34	2.53	2.73	2.95	3.17	3.41	3.66	3.92	4.19	4.47	4.76	5.07	5.38	5.71	6.05	6.40	6.76	7.14
13.5	1.54	1.70	1.87	2.05	2.23	2.43	2.64	2.87	3.10	3.35	3.60	3.87	4.15	4.44	4.75	5.07	5.39	5.74	6.09	6.45	6.83	7.22	7.62
14.5	1.57	1.74	1.92	2.11	2.32	2.54	2.76	3.01	3.26	3.52	3.80	4.09	4.39	4.71	5.04	5.38	5.73	6.10	6.48	6.87	7.27	7.69	8.12
15.5	1.59	1.78	1.97	2.18	2.41	2.64	2.89	3.15	3.42	3.71	4.01	4.32	4.64	4.98	5.33	5.70	6.08	6.47	6.87	7.29	7.72	8.16	8.62
16.5	1.61	1.82	2.03	2.26	2.50	2.75	3.02	3.30	3.59	3.90	4.22	4.55	4.90	5.26	5.64	6.03	6.43	6.85	7.28	7.72	8.18	8.65	9.13
17.5	1.64	1.86	2.09	2.33	2.59	2.86	3.15	3.45	3.76	4.09	4.44	4.79	5.16	5.55	5.95	6.36	6.79	7.23	7.69	8.16	8.64	9.14	9.65
18.5	1.67	1.90	2.15	2.41	2.69	2.98	3.29	3.61	3.94	4.29	4.66	5.04	5.43	5.84	6.27	6.70	7.16	7.62	8.10	8.60	9.11	9.63	10.17
19.5	1.69	1.95	2.21	2.49	2.79	3.10	3.43	3.77	4.13	4.50	4.89	5.29	5.71	6.14	6.59	7.05	7.53	8.02	8.53	9.05	9.58	10.13	10.69
20.5	1.72	1.99	2.28	2.58	2.89	3.23	3.57	3.94	4.32	4.71	5.12	5.55	5.99	6.44	6.92	7.40	7.91	8.42	8.95	9.50	10.06	10.63	11.22
21.5	1.75	2.04	2.34	2.66	3.00	3.35	3.72	4.11	4.51	4.93	5.36	5.81	6.27	6.75	7.25	7.76	8.29	8.83	9.39	9.96	10.54	11.14	11.75
22.5	1.78	2.09	2.41	2.75	3.11	3.48	3.87	4.28	4.71	5.15	5.60	6.07	6.56	7.07	7.59	8.12	8.67	9.24	9.82	10.41	11.02	11.65	12.28
23.5	1.82	2.14	2.48	2.85	3.22	3.62	4.03	4.46	4.91	5.37	5.85	6.35	6.86	7.39	7.93	8.49	9.06	9.65	10.26	10.88	11.51	12.15	12.81
24.5	1.85	2.19	2.56	2.94	3.34	3.76	4.19	4.64	5.11	5.60	6.10	6.62	7.16	7.71	8.28	8.86	9.46	10.07	10.70	11.34	11.99	12.66	13.34
25.5	1.88	2.25	2.63	3.04	3.46	3.90	4.35	4.83	5.32	5.83	6.36	6.90	7.46	8.03	8.62	9.23	9.85	10.49	11.14	11.80	12.48	13.17	13.87
26.5	1.92	2.30	2.71	3.14	3.58	4.04	4.52	5.02	5.53	6.06	6.61	7.18	7.76	8.36	8.97	9.60	10.25	10.90	11.58	12.26	12.96	13.67	14.40
27.5	1.95	2.36	2.79	3.24	3.70	4.19	4.69	5.21	5.75	6.30	6.87	7.46	8.07	8.69	9.33	9.98	10.64	11.32	12.02	12.72	13.44	14.18	14.92
28.5	1.99	2.42	2.87	3.34	3.83	4.34	4.86	5.40	5.97	6.54	7.14	7.75	8.38	9.02	9.68	10.35	11.04	11.74	12.46	13.18	13.92	14.68	15.44
29.5	2.03	2.48	2.95	3.45	3.96	4.49	5.04	5.60	6.19	6.79	7.41	8.04	8.69	9.35	10.03	10.73	11.44	12.16	12.89	13.64	14.40	15.17	15.95
30.5	2.06	2.54	3.04	3.55	4.09	4.64	5.21	5.80	6.41	7.03	7.67	8.33	9.00	9.69	10.39	11.10	11.83	12.57	13.33	14.10	14.87	15.66	16.46
31.5	2.10	2.60	3.12	3.66	4.22	4.80	5.39	6.01	6.64	7.28	7.94	8.62	9.31	10.02	10.74	11.48	12.23	12.99	13.76	14.55	15.34	16.15	16.97
32.5	2.14	2.67	3.21	3.78	4.36	4.96	5.58	6.21	6.86	7.53	8.22	8.92	9.63	10.36	11.10	11.85	12.62	13.40	14.19	15.00	15.81	16.63	17.47
33.5	2.19	2.73	3.30	3.89	4.50	5.12	5.76	6.42	7.09	7.78	8.49	9.21	9.94	10.69	11.45	12.23	13.02	13.81	14.62	15.44	16.27	17.11	17.96
34.5	2.23	2.80	3.39	4.01	4.64	5.28	5.95	6.63	7.32	8.04	8.76	9.51	10.26	11.03	11.81	12.60	13.41	14.22	15.05	15.88	16.73	17.58	18.45
35.5	2.27	2.87	3.49	4.12	4.78	5.45	6.14	6.84	7.56	8.29	9.04	9.80	10.58	11.36	12.16	12.97	13.79	14.63	15.47	16.32	17.18	18.05	18.93
36.5	2.32	2.94	3.58	4.24	4.92	5.61	6.33	7.05	7.79	8.55	9.32	10.10	10.89	11.70	12.51	13.34	14.18	15.03	15.88	16.75	17.62	18.51	19.40
37.5	2.36	3.01	3.68	4.36	5.07	5.78	6.52	7.27	8.03	8.80	9.59	10.39	11.20	12.03	12.86	13.71	14.56	15.42	16.30	17.18	18.06	18.96	19.86
38.5	2.41	3.08	3.78	4.49	5.21	5.95	6.71	7.48	8.26	9.06	9.87	10.69	11.52	12.36	13.21	14.07	14.94	15.82	16.70	17.60	18.50	19.40	20.32
39.5	2.45	3.16	3.88	4.61	5.36	6.13	6.91	7.70	8.50	9.32	10.14	10.98	11.83	12.69	13.56	14.43	15.32	16.21	17.11	18.01	18.92	19.84	20.77
40.5	2.50	3.23	3.98	4.74	5.51	6.30	7.10	7.91	8.74	9.57	10.42	11.28	12.14	13.02	13.90	14.79	15.69	16.59	17.50	18.42	19.35	20.27	21.21
41.5	2.55	3.31	4.08	4.87	5.66	6.47	7.30	8.13	8.98	9.83	10.70	11.57	12.45	13.34	14.24	15.14	16.06	16.97	17.90	18.82	19.76	20.70	21.64
42.5	2.60	3.39	4.18	4.99	5.82	6.65	7.50	8.35	9.22	10.09	10.97	11.86	12.76	13.67	14.58	15.49	16.42	17.35	18.28	19.22	20.17	21.11	22.07
43.5	2.65	3.46	4.29	5.12	5.97	6.83	7.69	8.57	9.45	10.35	11.25	12.15	13.07	13.99	14.91	15.84	16.78	17.72	18.66	19.61	20.57	21.52	22.48
44.5	2.70	3.54	4.39	5.26	6.13	7.01	7.89	8.79	9.69	10.60	11.52	12.44	13.37	14.30	15.24	16.19	17.13	18.08	19.04	20.00	20.96	21.93	22.89
45.5	2.75	3.62	4.50	5.39	6.28	7.19	8.09	9.01	9.93	10.86	11.79	12.73	13.67	14.62	15.57	16.52	17.48	18.44	19.41	20.38	21.35	22.32	23.29
46.5	2.81	3.71	4.61	5.52	6.44	7.37	8.30	9.23	10.17	11.11	12.06	13.02	13.97	14.93	15.89	16.86	17.83	18.80	19.77	20.75	21.73	22.71	23.69
47.5	2.86	3.79	4.72	5.66	6.60	7.55	8.50	9.45	10.41	11.37	12.33	13.30	14.27	15.24	16.22	17.19	18.17	19.15	20.13	21.11	22.10	23.09	24.07
48.5	2.92	3.87	4.83	5.79	6.76	7.73	8.70	9.67	10.65	11.62	12.60	13.58	14.56	15.55	16.53	17.52	18.51	19.49	20.48	21.47	22.46	23.46	24.45
49.5	2.97	3.96	4.94	5.93	6.92	7.91	8.90	9.89	10.88	11.87	12.87	13.86	14.86	15.85	16.84	17.84	18.84	19.83	20.83	21.83	22.82	23.82	24.82
50.5	3.03	4.04	5.06	6.07	7.08	8.09	9.10	10.11	11.12	12.13	13.13	14.14	15.14	16.15	17.15	18.16	19.16	20.17	21.17	22.17	23.17	24.18	25.18
51.5	3.09	4.13	5.17	6.21	7.24	8.27	9.30	10.33	11.35	12.37	13.39	14.41	15.43	16.45	17.46	18.47	19.48	20.49	21.50	22.51	23.52	24.53	25.53
52.5	3.14	4.22	5.29	6.35	7.40	8.46	9.50	10.55	11.59	12.62	13.66	14.69	15.71	16.74	17.76	18.78	19.80	20.82	21.83	22.84	23.86	24.87	25.88
53.5	3.20	4.31	5.40	6.49	7.57	8.64	9.71	10.76	11.82	12.87	13.91	14.96	15.99	17.03	18.06	19.08	20.11	21.13	22.15	23.17	24.19	25.20	26.22
54.5	3.26	4.40	5.52	6.63	7.73	8.82	9.91	10.98	12.05	13.11	14.17	15.22	16.27	17.31	18.35	19.38	20.42	21.44	22.47	23.49	24.51	25.53	26.55
55.5	3.32	4.49	5.64	6.77	7.89	9.01	10.11	11.20	12.28	13.36	14.42	15.49	16.54	17.59	18.64	19.68	20.72	21.75	22.78	23.81	24.83	25.85	26.87
56.5	3.38	4.58	5.75	6.91	8.06	9.19	10.31	11.41	12.51	13.60	14.68	15.75	16.81	17.87	18.92	19.97	21.01	22.05	23.08	24.11	25.14	26.16	27.18
57.5	3.44	4.67	5.87	7.06	8.22	9.37	10.51	11.63	12.74	13.84	14.93	16.01	17.08	18.14	19.20	20.25	21.30	22.34	23.38	24.41	25.44	26.47	27.49
58.5	3.51	4.76	5.99	7.20	8.39	9.55	10.71	11.84	12.96	14.07	15.17	16.26	17.34	18.41	19.48	20.54	21.59	22.63	23.67	24.71	25.74	26.77	27.79
59.5	3.57	4.86	6.11	7.34	8.55	9.74	10.90	12.05	13.19	14.31	15.42	16.51	17.60	18.68	19.75	20.81	21.87	22.92	23.96	25.00	26.03	27.06	28.09
60.5	3.63	4.95	6.23	7.49	8.72	9.92	11.10	12.26	13.41	14.54	15.66	16.76	17.86	18.94	20.02	21.08	22.14	23.20	24.24	25.28	26.32	27.35	28.38
61.5	3.70	5.05	6.36	7.63	8.88	10.10	11.30	12.47	13.63	14.77	15.90	17.01	18.11	19.20	20.28	21.35	22.41	23.47	24.52	25.56	26.60	27.63	28.66
62.5	3.76	5.14	6.48	7.78	9.04	10.28	11.49	12.68	13.85	15.00	16.13	17.25	18.36	19.45	20.54	21.61	22.68	23.74	24.79	25.83	26.87	27.90	28.93
63.5	3.83	5.24	6.60	7.92	9.21	10.46	11.69	12.89	14.07	15.23	16.37	17.49	18.61	19.70	20.79	21.87	22.94	24.00	25.05	26.10	27.14	28.17	29.20
64.5	3.89	5.33	6.72	8.07	9.37	10.64	11.88	13.09	14.28	15.45	16.60	17.73	18.85	19.95	21.04	22.12	23.19	24.26	25.31	26.36	27.40	28.43	29.46
65.5	3.96	5.43	6.85	8.21	9.54	10.82	12.07	13.30	14.50	15.67	16.83	17.97	19.09	20.19	21.29	22.37	23.44	24.51	25.56	26.61	27.65	28.69	29.72
66.5	4.03	5.53	6.97	8.36	9.70	11.00	12.27	13.50	14.71	15.89	17.05	18.20	19.32	20.43	21.53	22.62	23.69	24.76	25.81	26.86	27.90	28.94	29.97
67.5	4.09	5.63	7.10	8.50	9.86	11.18	12.46	13.70	14.92	16.11	17.28	18.42	19.55	20.67	21.77	22.86	23.93	25.00	26.06	27.11	28.15	29.18	30.21
68.5	4.16	5.73	7.22	8.65	10.03	11.36	12.65	13.90	15.13	16.32	17.50	18.65	19.78	20.90	22.00	23.09	24.17	25.24	26.29	27.34	28.39	29.42	30.45
69.5	4.23	5.83	7.34	8.80	10.19	11.53	12.83	14.10	15.33	16.53	17.71	18.87	20.01	21.13	22.23	23.32	24.40	25.47	26.53	27.58	28.62	29.65	30.68
70.5	4.30	5.93	7.47	8.94	10.35	11.71	13.02	14.29	15.53	16.74	17.93	19.09	20.23	21.35	22.46	23.55	24.63	25.70	26.76	27.81	28.85	29.88	30.91
71.5	4.37	6.03	7.60	9.09	10.51	11.88	13.21	14.49	15.74	16.95	18.14	19.30	20.45	21.57	22.68	23.77	24.85	25.92	26.98	28.03	29.07	30.10	31.13
72.5	4.44	6.13	7.72	9.23	10.67	12.06	13.39	14.68	15.93	17.15	18.35	19.51	20.66	21.79	22.90	23.99	25.07	26.14	27.20	28.25	29.29	30.32	31.35
73.5	4.51	6.23	7.85	9.38	10.83	12.23	13.57	14.87	16.13	17.36	18.55	19.72	20.87	22.00	23.11	24.20	25.29	26.36	27.41	28.46	29.50	30.53	31.56
74.5	4.59	6.33	7.97	9.52	10.99	12.40	13.75	15.06	16.33	17.56	18.76	19.93	21.08	22.21	23.32	24.42	25.50	26.57	27.62	28.67	29.71	30.74	31.77
75.5	4.66	6.44	8.10	9.67	11.15	12.57	13.93	15.25	16.52	17.75	18.96	20.13	21.28	22.41	23.53	24.62	25.70	26.77	27.83	28.88	29.91	30.94	31.97
76.5	4.73	6.54	8.22	9.81	11.31	12.74	14.11	15.43	16.71	17.95	19.15	20.33	21.48	22.62	23.73	24.82	25.91	26.97	28.03	29.08	30.11	31.14	32.16
77.5	4.80	6.64	8.35	9.95	11.47	12.91	14.29	15.62	16.90	18.14	19.35	20.53	21.68	22.81	23.93	25.02	26.10	27.17	28.23	29.27	30.31	31.34	32.36
78.5	4.88	6.74	8.48	10.10	11.63	13.08	14.46	15.80	17.08	18.33	19.54	20.72	21.88	23.01	24.12	25.22	26.30	27.37	28.42	29.46	30.50	31.53	32.55
79.5	4.95	6.85	8.60	10.24	11.78	13.24	14.64	15.98	17.27	18.52	19.73	20.91	22.07	23.20	24.31	25.41	26.49	27.55	28.61	29.65	30.69	31.71	32.73
80.5	5.03	6.95	8.73	10.38	11.94	13.41	14.81	16.15	17.45	18.70	19.92	21.10	22.26	23.39	24.50	25.60	26.68	27.74	28.79	29.84	30.87	31.89	32.91
81.5	5.10	7.06	8.85	10.52	12.09	13.57	14.98	16.33	17.63	18.88	20.10	21.28	22.44	23.57	24.69	25.78	26.86	27.92	28.97	30.02	31.05	32.07	33.08
82.5	5.18	7.16	8.98	10.67	12.24	13.73	15.15	16.50	17.80	19.06	20.28	21.47	22.62	23.76	24.87	25.96	27.04	28.10	29.15	30.19	31.22	32.24	33.25
83.5	5.25	7.26	9.10	10.81	12.40	13.90	15.32	16.68	17.98	19.24	20.46	21.64	22.80	23.93	25.05	26.14	27.21	28.28	29.32	30.36	31.39	32.41	33.42
84.5	5.33	7.37	9.23	10.95	12.55	14.06	15.48	16.85	18.15	19.41	20.63	21.82	22.98	24.11	25.22	26.31	27.39	28.45	29.49	30.53	31.56	32.58	33.59
85.5	5.40	7.47	9.35	11.09	12.70	14.21	15.65	17.01	18.32	19.59	20.81	21.99	23.15	24.28	25.39	26.48	27.56	28.61	29.66	30.70	31.72	32.74	33.74
86.5	5.48	7.58	9.48	11.23	12.85	14.37	15.81	17.18	18.49	19.75	20.98	22.16	23.32	24.45	25.56	26.65	27.72	28.78	29.82	30.86	31.88	32.89	33.90
87.5	5.56	7.68	9.60	11.37	13.00	14.53	15.97	17.34	18.66	19.92	21.14	22.33	23.49	24.62	25.73	26.81	27.88	28.94	29.98	31.01	32.04	33.05	34.05
88.5	5.63	7.79	9.73	11.50	13.15	14.68	16.13	17.51	18.82	20.09	21.31	22.50	23.65	24.78	25.89	26.97	28.04	29.10	30.14	31.17	32.19	33.20	34.20
89.5	5.71	7.89	9.85	11.64	13.29	14.84	16.29	17.67	18.98	20.25	21.47	22.66	23.81	24.94	26.05	27.13	28.20	29.25	30.29	31.32	32.34	33.35	34.35

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A2. White spruce height and site index prediction table white spruce in subregions 7 to-10 (continued).

Bhage* (years)	Site index (m) at 50 years Bhage																						
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
90.5	5.79	8.00	9.98	11.78	13.44	14.99	16.44	17.82	19.14	20.41	21.63	22.82	23.97	25.10	26.20	27.29	28.35	29.40	30.44	31.47	32.48	33.49	34.49
91.5	5.87	8.10	10.10	11.91	13.58	15.14	16.60	17.98	19.30	20.57	21.79	22.98	24.13	25.25	26.36	27.44	28.50	29.55	30.59	31.61	32.63	33.63	34.63
92.5	5.95	8.21	10.22	12.05	13.73	15.29	16.75	18.14	19.46	20.72	21.95	23.13	24.28	25.41	26.51	27.59	28.65	29.70	30.73	31.75	32.77	33.77	34.77
93.5	6.03	8.31	10.35	12.18	13.87	15.43	16.90	18.29	19.61	20.88	22.10	23.28	24.43	25.55	26.65	27.73	28.79	29.84	30.87	31.89	32.90	33.90	34.90
94.5	6.10	8.42	10.47	12.32	14.01	15.58	17.05	18.44	19.76	21.03	22.25	23.43	24.58	25.70	26.80	27.88	28.93	29.98	31.01	32.03	33.04	34.04	35.03
95.5	6.18	8.52	10.59	12.45	14.15	15.73	17.20	18.59	19.91	21.18	22.40	23.58	24.73	25.85	26.94	28.02	29.07	30.11	31.14	32.16	33.17	34.17	35.16
96.5	6.26	8.63	10.71	12.58	14.29	15.87	17.34	18.74	20.06	21.32	22.54	23.72	24.87	25.99	27.08	28.15	29.21	30.25	31.28	32.29	33.30	34.29	35.28
97.5	6.34	8.73	10.83	12.72	14.43	16.01	17.49	18.88	20.20	21.47	22.69	23.86	25.01	26.13	27.22	28.29	29.34	30.38	31.40	32.42	33.42	34.42	35.40
98.5	6.42	8.84	10.95	12.85	14.57	16.15	17.63	19.02	20.35	21.61	22.83	24.00	25.15	26.26	27.35	28.42	29.47	30.51	31.53	32.54	33.54	34.54	35.52
99.5	6.50	8.94	11.07	12.98	14.70	16.29	17.77	19.17	20.49	21.75	22.97	24.14	25.28	26.40	27.48	28.55	29.60	30.63	31.66	32.66	33.66	34.66	35.64
100.5	6.58	9.05	11.19	13.11	14.84	16.43	17.91	19.31	20.63	21.89	23.10	24.28	25.42	26.53	27.61	28.68	29.73	30.76	31.78	32.78	33.78	34.77	35.75
101.5	6.66	9.15	11.31	13.23	14.97	16.57	18.05	19.44	20.77	22.03	23.24	24.41	25.55	26.66	27.74	28.80	29.85	30.88	31.90	32.90	33.90	34.88	35.86
102.5	6.74	9.25	11.43	13.36	15.10	16.70	18.19	19.58	20.90	22.16	23.37	24.54	25.68	26.78	27.87	28.93	29.97	31.00	32.01	33.02	34.01	35.00	35.97
103.5	6.83	9.36	11.55	13.49	15.24	16.84	18.32	19.71	21.03	22.29	23.50	24.67	25.80	26.91	27.99	29.05	30.09	31.11	32.13	33.13	34.12	35.10	36.08
104.5	6.91	9.46	11.67	13.61	15.37	16.97	18.45	19.85	21.17	22.42	23.63	24.80	25.93	27.03	28.11	29.17	30.20	31.23	32.24	33.24	34.23	35.21	36.18
105.5	6.99	9.57	11.78	13.74	15.49	17.10	18.59	19.98	21.30	22.55	23.76	24.92	26.05	27.15	28.23	29.28	30.32	31.34	32.35	33.35	34.33	35.31	36.29
106.5	7.07	9.67	11.90	13.86	15.62	17.23	18.72	20.11	21.42	22.68	23.88	25.04	26.17	27.27	28.34	29.39	30.43	31.45	32.46	33.45	34.44	35.42	36.39
107.5	7.15	9.77	12.02	13.99	15.75	17.36	18.84	20.24	21.55	22.80	24.00	25.16	26.29	27.39	28.46	29.51	30.54	31.56	32.56	33.56	34.54	35.52	36.49
108.5	7.23	9.88	12.13	14.11	15.88	17.48	18.97	20.36	21.67	22.93	24.13	25.28	26.41	27.50	28.57	29.62	30.65	31.66	32.67	33.66	34.64	35.61	36.58
109.5	7.31	9.98	12.25	14.23	16.00	17.61	19.10	20.49	21.80	23.05	24.24	25.40	26.52	27.61	28.68	29.72	30.75	31.77	32.77	33.76	34.74	35.71	36.68
110.5	7.39	10.08	12.36	14.35	16.12	17.73	19.22	20.61	21.92	23.17	24.36	25.51	26.63	27.72	28.79	29.83	30.86	31.87	32.87	33.85	34.83	35.80	36.77
111.5	7.48	10.18	12.48	14.47	16.25	17.86	19.34	20.73	22.04	23.28	24.48	25.63	26.74	27.83	28.89	29.93	30.96	31.97	32.96	33.95	34.93	35.90	36.86
112.5	7.56	10.29	12.59	14.59	16.37	17.98	19.46	20.85	22.16	23.40	24.59	25.74	26.85	27.94	29.00	30.03	31.06	32.06	33.06	34.04	35.02	35.99	36.95
113.5	7.64	10.39	12.70	14.71	16.49	18.10	19.58	20.97	22.27	23.51	24.70	25.85	26.96	28.04	29.10	30.13	31.15	32.16	33.15	34.14	35.11	36.07	37.03
114.5	7.72	10.49	12.81	14.82	16.61	18.22	19.70	21.08	22.39	23.62	24.81	25.95	27.06	28.14	29.20	30.23	31.25	32.25	33.24	34.23	35.20	36.16	37.12
115.5	7.80	10.59	12.92	14.94	16.72	18.34	19.82	21.20	22.50	23.73	24.92	26.06	27.17	28.24	29.30	30.33	31.34	32.35	33.34	34.31	35.28	36.25	37.20
116.5	7.88	10.69	13.03	15.05	16.84	18.45	19.93	21.31	22.61	23.84	25.02	26.16	27.27	28.34	29.39	30.42	31.44	32.44	33.42	34.40	35.37	36.33	37.28
117.5	7.97	10.79	13.14	15.17	16.96	18.57	20.05	21.42	22.72	23.95	25.13	26.27	27.37	28.44	29.49	30.52	31.53	32.53	33.51	34.48	35.45	36.41	37.36
118.5	8.05	10.89	13.25	15.28	17.07	18.68	20.16	21.53	22.83	24.06	25.23	26.37	27.46	28.53	29.58	30.61	31.62	32.61	33.60	34.57	35.53	36.49	37.44
119.5	8.13	10.99	13.36	15.39	17.18	18.79	20.27	21.64	22.93	24.16	25.33	26.46	27.56	28.63	29.67	30.70	31.70	32.70	33.68	34.65	35.61	36.57	37.52
120.5	8.21	11.09	13.47	15.50	17.29	18.90	20.38	21.75	23.04	24.26	25.43	26.56	27.66	28.72	29.76	30.78	31.79	32.78	33.76	34.73	35.69	36.64	37.59
121.5	8.29	11.19	13.58	15.61	17.41	19.01	20.49	21.86	23.14	24.36	25.53	26.66	27.75	28.81	29.85	30.87	31.87	32.86	33.84	34.81	35.77	36.72	37.67
122.5	8.37	11.29	13.68	15.72	17.52	19.12	20.59	21.96	23.24	24.46	25.63	26.75	27.84	28.90	29.94	30.96	31.96	32.94	33.92	34.89	35.84	36.79	37.74
123.5	8.46	11.39	13.79	15.83	17.62	19.23	20.70	22.06	23.34	24.56	25.72	26.84	27.93	28.99	30.02	31.04	32.04	33.02	34.00	34.96	35.92	36.87	37.81
124.5	8.54	11.48	13.89	15.94	17.73	19.34	20.80	22.16	23.44	24.66	25.82	26.93	28.02	29.08	30.11	31.12	32.12	33.10	34.07	35.04	35.99	36.94	37.88
125.5	8.62	11.58	14.00	16.05	17.84	19.44	20.91	22.26	23.54	24.75	25.91	27.02	28.11	29.16	30.19	31.20	32.20	33.18	34.15	35.11	36.06	37.01	37.95
126.5	8.70	11.68	14.10	16.15	17.94	19.55	21.01	22.36	23.64	24.84	26.00	27.11	28.19	29.24	30.27	31.28	32.27	33.25	34.22	35.18	36.13	37.07	38.01
127.5	8.78	11.78	14.20	16.26	18.05	19.65	21.11	22.46	23.73	24.94	26.09	27.20	28.28	29.32	30.35	31.36	32.35	33.33	34.29	35.25	36.20	37.14	38.08
128.5	8.86	11.87	14.31	16.36	18.15	19.75	21.21	22.56	23.82	25.03	26.18	27.28	28.36	29.41	30.43	31.43	32.42	33.40	34.36	35.32	36.27	37.21	38.14
129.5	8.94	11.97	14.41	16.46	18.25	19.85	21.30	22.65	23.92	25.12	26.26	27.37	28.44	29.48	30.51	31.51	32.50	33.47	34.43	35.39	36.33	37.27	38.21
130.5	9.03	12.06	14.51	16.57	18.35	19.95	21.40	22.75	24.01	25.20	26.35	27.45	28.52	29.56	30.58	31.58	32.57	33.54	34.50	35.45	36.40	37.34	38.27
131.5	9.11	12.16	14.61	16.67	18.45	20.05	21.50	22.84	24.10	25.29	26.43	27.53	28.60	29.64	30.66	31.65	32.64	33.61	34.57	35.52	36.46	37.40	38.33
132.5	9.19	12.25	14.71	16.77	18.55	20.14	21.59	22.93	24.19	25.38	26.51	27.61	28.68	29.71	30.73	31.73	32.71	33.68	34.63	35.58	36.52	37.46	38.39
133.5	9.27	12.35	14.81	16.87	18.65	20.24	21.68	23.02	24.27	25.46	26.60	27.69	28.75	29.79	30.80	31.80	32.77	33.74	34.70	35.64	36.58	37.52	38.45
134.5	9.35	12.44	14.91	16.97	18.75	20.33	21.78	23.11	24.36	25.54	26.68	27.77	28.83	29.86	30.87	31.86	32.84	33.81	34.76	35.71	36.64	37.58	38.50
135.5	9.43	12.53	15.00	17.06	18.84	20.43	21.87	23.20	24.44	25.62	26.76	27.85	28.90	29.93	30.94	31.93	32.91	33.87	34.82	35.77	36.70	37.63	38.56
136.5	9.51	12.63	15.10	17.16	18.94	20.52	21.96	23.28	24.53	25.70	26.83	27.92	28.98	30.00	31.01	32.00	32.97	33.93	34.88	35.83	36.76	37.69	38.62
137.5	9.59	12.72	15.20	17.26	19.03	20.61	22.04	23.37	24.61	25.78	26.91	27.99	29.05	30.07	31.08	32.06	33.03	33.99	34.94	35.88	36.82	37.75	38.67
138.5	9.67	12.81	15.29	17.35	19.13	20.70	22.13	23.45	24.69	25.86	26.99	28.07	29.12	30.14	31.14	32.13	33.10	34.05	35.00	35.94	36.87	37.80	38.72
139.5	9.75	12.90	15.39	17.44	19.22	20.79	22.22	23.53	24.77	25.94	27.06	28.14	29.19	30.21	31.21	32.19	33.16	34.11	35.06	36.00	36.93	37.85	38.78
140.5	9.83	12.99	15.48	17.54	19.31	20.88	22.30	23.62	24.85	26.02	27.13	28.21	29.25	30.27	31.27	32.25	33.22	34.17	35.12	36.05	36.98	37.91	38.83
141.5	9.91	13.08	15.57	17.63	19.40	20.97	22.39	23.70	24.93	26.09	27.20	28.28	29.32	30.34	31.33	32.31	33.28	34.23	35.17	36.11	37.04	37.96	38.88
142.5	9.99	13.17	15.66	17.72	19.49	21.05	22.47	23.78	25.00	26.16	27.28	28.35	29.39	30.40	31.40	32.37	33.34	34.29	35.23	36.16	37.09	38.01	38.93
143.5	10.07	13.26	15.76	17.81	19.58	21.14	22.55	23.85	25.08	26.24	27.35	28.42	29.45	30.47	31.46	32.43	33.39	34.34	35.28	36.21	37.14	38.06	38.98
144.5	10.15	13.35	15.85	17.90	19.66	21.22	22.63	23.93	25.15	26.31	27.41	28.48	29.52	30.53	31.52	32.49	33.45	34.40	35.34	36.27	37.19	38.11	39.02
145.5	10.23	13.44	15.94	17.99	19.75	21.30	22.71	24.01	25.23	26.38	27.48	28.55	29.58	30.59	31.58	32.55	33.50	34.45	35.39	36.32	37.24	38.16	39.07
146.5	10.31	13.53	16.03	18.08	19.83	21.39	22.79	24.08	25.30	26.45	27.55	28.61	29.64	30.65	31.63	32.60	33.56	34.50	35.44	36.37	37.29	38.20	39.12
147.5	10.38	13.61	16.12	18.17	19.92	21.47	22.87	24.16	25.37	26.52	27.61	28.67	29.70	30.71	31.69	32.66	33.61	34.56	35.49	36.42	37.34	38.25	39.16
148.5	10.46	13.70	16.20	18.25	20.00	21.55	22.94	24.23	25.44	26.58	27.68	28.74	29.76	30.77	31.75	32.71	33.66	34.61	35.54	36.46	37.38	38.30	39.21
149.5	10.54	13.79	16.29	18.34	20.08	21.63	23.02	24.30	25.51	26.65	27.74	28.80	29.82	30.82	31.80	32.77	33.72	34.66	35.59	36.51	37.43	38.34	39.25
150.5	10.62	13.87	16.38	18.42	20.17	21.70	23.09	24.38	25.58	26.72	27.81	28.86	29.88	30.88	31.86	32.82	33.77	34.71	35.64	36.56	37.47	38.39	39.29
151.5	10.70	13.96	16.46	18.51	20.25	21.78	23.17	24.45	25.64	26.78	27.87	28.92	29.94	30.93	31.91	32.87	33.82	34.75	35.68	36.60	37.52	38.43	39.34
152.5	10.77	14.04	16.55	18.59	20.33	21.86	23.24	24.52	25.71	26.84	27.93	28.98	29.99	30.99	31.96	32.92	33.87	34.80	35.73	36.65	37.56	38.47	39.38
153.5	10.85	14.13	16.63	18.67	20.41	21.93	23.31	24.59	25.78	26.91	27.99	29.04	30.05	31.04	32.01	32.97	33.92	34.85	35.77	36.69	37.61	38.51	39.42
154.5	10.93	14.21	16.72	18.75	20.48	22.01	23.38	24.65	25.84	26.97	28.05	29.09	30.11	31.09	32.07	33.02	33.96	34.90	35.82	36.74	37.65	38.56	39.46
155.5	11.00	14.30	16.80	18.83	20.56	22.08	23.45	24.72	25.91	27.03	28.11	29.15	30.16	31.15	32.12	33.07	34.01	34.94	35.86	36.78	37.69	38.60	39.50
156.5	11.08	14.38	16.88	18.91	20.64	22.15	23.52	24.79	25.97	27.09	28.17	29.20	30.21	31.20	32.16	33.12	34.06	34.99	35.91	36.82	37.73	38.64	39.54
157.5	11.16	14.46	16.97	18.99	20.71	22.23	23.59	24.85	26.03	27.15	28.22	29.26	30.26	31.25	32.21	33.16	34.10	35.03	35.95	36.86	37.77	38.67	39.58
158.5	11.23	14.54	17.05	19.07	20.79	22.30	23.66	24.92	26.09	27.21	28.28	29.31	30.32	31.30	32.26	33.21	34.15	35.07	35.99	36.90	37.81	38.71	39.61
159.5	11.31	14.62	17.13	19.15	20.86	22.37	23.73	24.98	26.15	27.27	28.33	29.36	30.37	31.35	32.31	33.26	34.19	35.12	36.03	36.94	37.85	38.75	39.65
160.5	11.39	14.71	17.21	19.23	20.94	22.44	23.79	25.04	26.21	27.32	28.39	29.42	30.42	31.40	32.36	33.30	34.23	35.16	36.07	36.98	37.89	38.79	39.69
161.5	11.46	14.79	17.29	19.30	21.01	22.51	23.86	25.10	26.27	27.38	28.44	29.47	30.47	31.44	32.40	33.34	34.28	35.20	36.11	37.02	37.93	38.83	39.72
162.5	11.54	14.87	17.37	19.38	21.08	22.57	23.92	25.16	26.33	27.43	28.49	29.52	30.52	31.49	32.45	33.39	34.32	35.24	36.15	37.06	37.96	38.86	39.76
163.5	11.61	14.94	17.44	19.45	21.15	22.64	23.99	25.23	26.39	27.49	28.55	29.57	30.56	31.54	32.49	33.43	34.36	35.28	36.19	37.10	38.00	38.90	39.79
164.5	11.69	15.02	17.52	19.53	21.22	22.71	24.05	25.28	26.44	27.54	28.60	29.62	30.61	31.58	32.53	33.47	34.40	35.32	36.23	37.14	38.04	38.93	39.83
165.5	11.76	15.10	17.60	19.60	21.29	22.77	24.11	25.34	26.50	27.60	28.65	29.67	30.66	31.63	32.58	33.51	34.44	35.36	36.27	37.17	38.07	38.97	39.86
166.5	11.83	15.18	17.67	19.67	21.36	22.84	24.17	25.40	26.55	27.65	28.70	29.71	30.70	31.67	32.62	33.56	34.48	35.40	36.30	37.21	38.11	39.00	39.89
167.5	11.91	15.26	17.75	19.74	21.43	22.90	24.23	25.46	26.61	27.70	28.75	29.76	30.75	31.71	32.66	33.60	34.52	35.43	36.34	37.24	38.14	39.03	39.92
168.5	11.98	15.33	17.82	19.82	21.49	22.96	24.29	25.51	26.66	27.75	28.80	29.81	30.79	31.76	32.70	33.64	34.56	35.47	36.38	37.28	38.17	39.07	39.96
169.5	12.05	15.41	17.90	19.89	21.56	23.03	24.35	25.57	26.71	27.80	28.84	29.85	30.84	31.80	32.74	33.67	34.59	35.51	36.41	37.31	38.21	39.10	39.99
170.5	12.13	15.49	17.97	19.96	21.63	23.09	24.41	25.63	26.77	27.85	28.89	29.90	30.88	31.84	32.78	33.71	34.63	35.54	36.45	37.35	38.24	39.13	40.02
171.5	12.20	15.56	18.04	20.02	21.69	23.15	24.47	25.68	26.82	27.90	28.94	29.94	30.92	31.88	32.82	33.75	34.67	35.58	36.48	37.38	38.27	39.16	40.05
172.5	12.27	15.64	18.12	20.09	21.76	23.21	24.52	25.73	26.87	27.95	28.98	29.99	30.96	31.92	32.86	33.79	34.70	35.61	36.51	37.41	38.30	39.19	40.08
173.5	12.34	15.71	18.19	20.16	21.82	23.27	24.58	25.79	26.92	28.00	29.03	30.03	31.01	31.96	32.90	33.82	34.74	35.65	36.55	37.44	38.34	39.22	40.11
174.5	12.42	15.78	18.26	20.23	21.88	23.33	24.63	25.84	26.97	28.04	29.07	30.07	31.05	32.00	32.94	33.86	34.78	35.68	36.58	37.48	38.37	39.25	40.14
175.5	12.49	15.86	18.33	20.29	21.94	23.39	24.69	25.89	27.02	28.09	29.12	30.12	31.09	32.04	32.97	33.90	34.81	35.71	36.61	37.51	38.40	39.28	40.17
176.5	12.56	15.93	18.40	20.36	22.01	23.45	24.74	25.94	27.07	28.14	29.16	30.16	31.13	32.08	33.01	33.93	34.84	35.75	36.64	37.54	38.43	39.31	40.20
177.5	12.63	16.00	18.47	20.42	22.07	23.50	24.80	25.99	27.11	28.18	29.21	30.20	31.17	32.11	33.05	33.97	34.88	35.78	36.68	37.57	38.46	39.34	40.22
178.5	12.70	16.07	18.54	20.49	22.13	23.56	24.85	26.04	27.16	28.22	29.25	30.24	31.20	32.15	33.08	34.00	34.91	35.81	36.71	37.60	38.48	39.37	40.25
179.5	12.77	16.15	18.61	20.55	22.19	23.61	24.90	26.09	27.21	28.27	29.29	30.28	31.24	32.19	33.12	34.03	34.94	35.84	36.74	37.63	38.51	39.40	40.28

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A3. White spruce height and site index prediction table in subregion 11.

Bhage*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
2.5	1.35	1.38	1.42	1.45	1.49	1.53	1.57	1.62	1.67	1.72	1.78	1.84	1.91	1.98	2.05	2.13	2.21	2.30	2.40	2.50	2.60	2.72	2.83
3.5	1.36	1.40	1.44	1.49	1.53	1.58	1.64	1.69	1.75	1.82	1.89	1.96	2.04	2.13	2.22	2.32	2.42	2.53	2.64	2.76	2.89	3.03	3.17
4.5	1.37	1.42	1.47	1.52	1.58	1.64	1.70	1.77	1.85	1.92	2.01	2.10	2.19	2.29	2.40	2.52	2.64	2.77	2.90	3.05	3.20	3.36	3.53
5.5	1.39	1.44	1.50	1.57	1.63	1.70	1.78	1.86	1.95	2.04	2.14	2.24	2.35	2.47	2.60	2.73	2.88	3.03	3.19	3.36	3.53	3.72	3.92
6.5	1.40	1.47	1.54	1.61	1.69	1.77	1.86	1.95	2.05	2.16	2.27	2.40	2.53	2.66	2.81	2.97	3.13	3.30	3.49	3.68	3.89	4.10	4.33
7.5	1.42	1.49	1.57	1.66	1.75	1.84	1.94	2.05	2.17	2.29	2.42	2.56	2.71	2.87	3.03	3.21	3.40	3.60	3.81	4.03	4.26	4.50	4.76
8.5	1.44	1.52	1.61	1.71	1.81	1.92	2.03	2.16	2.29	2.43	2.58	2.73	2.90	3.08	3.27	3.47	3.68	3.90	4.14	4.39	4.65	4.92	5.21
9.5	1.45	1.55	1.65	1.76	1.88	2.00	2.13	2.27	2.42	2.57	2.74	2.92	3.10	3.30	3.52	3.74	3.98	4.23	4.49	4.76	5.05	5.36	5.68
10.5	1.47	1.58	1.70	1.82	1.95	2.09	2.23	2.39	2.55	2.72	2.91	3.11	3.32	3.54	3.77	4.02	4.28	4.56	4.85	5.15	5.47	5.81	6.16
11.5	1.49	1.62	1.74	1.88	2.02	2.17	2.34	2.51	2.69	2.88	3.09	3.31	3.54	3.79	4.04	4.32	4.60	4.91	5.22	5.56	5.91	6.27	6.65
12.5	1.52	1.65	1.79	1.94	2.10	2.27	2.45	2.64	2.84	3.05	3.28	3.52	3.77	4.04	4.32	4.62	4.93	5.26	5.61	5.97	6.35	6.75	7.16
13.5	1.54	1.69	1.84	2.01	2.18	2.37	2.56	2.77	2.99	3.23	3.47	3.73	4.01	4.30	4.61	4.93	5.28	5.63	6.01	6.40	6.81	7.23	7.68
14.5	1.56	1.72	1.90	2.08	2.27	2.47	2.68	2.91	3.15	3.40	3.67	3.96	4.26	4.57	4.91	5.26	5.62	6.01	6.41	6.83	7.27	7.74	8.23
15.5	1.59	1.76	1.95	2.15	2.36	2.58	2.81	3.06	3.32	3.59	3.88	4.19	4.51	4.85	5.21	5.59	5.98	6.39	6.83	7.27	7.74	8.23	8.73
16.5	1.61	1.81	2.01	2.22	2.45	2.69	2.94	3.20	3.49	3.78	4.10	4.43	4.77	5.14	5.52	5.93	6.35	6.79	7.25	7.72	8.22	8.74	9.27
17.5	1.64	1.85	2.07	2.30	2.54	2.80	3.07	3.36	3.66	3.98	4.32	4.67	5.04	5.43	5.84	6.27	6.72	7.19	7.67	8.18	8.70	9.25	9.81
18.5	1.67	1.89	2.13	2.38	2.64	2.92	3.21	3.52	3.84	4.18	4.54	4.92	5.32	5.73	6.17	6.62	7.10	7.59	8.10	8.64	9.19	9.77	10.36
19.5	1.69	1.94	2.19	2.46	2.74	3.04	3.35	3.68	4.03	4.39	4.77	5.17	5.60	6.04	6.50	6.98	7.48	8.00	8.54	9.10	9.68	10.29	10.91
20.5	1.72	1.99	2.26	2.55	2.85	3.17	3.50	3.85	4.22	4.60	5.01	5.44	5.88	6.35	6.83	7.34	7.87	8.41	8.98	9.57	10.18	10.81	11.45
21.5	1.75	2.03	2.33	2.63	2.96	3.29	3.65	4.02	4.41	4.82	5.25	5.70	6.17	6.66	7.17	7.70	8.26	8.83	9.42	10.04	10.67	11.33	12.00
22.5	1.78	2.08	2.40	2.72	3.07	3.43	3.80	4.20	4.61	5.04	5.50	5.97	6.46	6.98	7.52	8.07	8.65	9.25	9.87	10.51	11.17	11.85	12.54
23.5	1.82	2.14	2.47	2.82	3.18	3.56	3.96	4.38	4.81	5.27	5.75	6.24	6.76	7.30	7.86	8.44	9.05	9.67	10.31	10.98	11.66	12.36	13.09
24.5	1.85	2.19	2.54	2.91	3.30	3.70	4.12	4.56	5.02	5.50	6.00	6.52	7.06	7.63	8.21	8.82	9.45	10.09	10.76	11.45	12.16	12.88	13.62
25.5	1.88	2.25	2.62	3.01	3.42	3.84	4.28	4.75	5.23	5.73	6.26	6.80	7.37	7.96	8.56	9.19	9.85	10.52	11.21	11.92	12.65	13.39	14.16
26.5	1.92	2.30	2.70	3.11	3.54	3.98	4.45	4.94	5.44	5.97	6.52	7.09	7.68	8.29	8.92	9.57	10.25	10.94	11.65	12.39	13.14	13.90	14.69
27.5	1.96	2.36	2.78	3.21	3.66	4.13	4.62	5.13	5.66	6.21	6.78	7.37	7.99	8.62	9.28	9.95	10.65	11.36	12.10	12.85	13.62	14.41	15.21
28.5	1.99	2.42	2.86	3.32	3.79	4.28	4.79	5.33	5.88	6.45	7.05	7.66	8.30	8.95	9.63	10.33	11.05	11.78	12.54	13.31	14.10	14.91	15.73
29.5	2.03	2.48	2.94	3.42	3.92	4.43	4.97	5.52	6.10	6.70	7.31	7.95	8.61	9.29	9.99	10.71	11.45	12.20	12.98	13.77	14.58	15.41	16.25
30.5	2.07	2.54	3.03	3.53	4.05	4.59	5.15	5.73	6.33	6.95	7.59	8.25	8.93	9.63	10.35	11.09	11.85	12.62	13.42	14.23	15.05	15.90	16.75
31.5	2.11	2.60	3.11	3.64	4.18	4.75	5.33	5.93	6.55	7.20	7.86	8.54	9.24	9.97	10.71	11.47	12.24	13.04	13.85	14.68	15.52	16.38	17.25
32.5	2.15	2.67	3.20	3.75	4.32	4.91	5.51	6.14	6.78	7.45	8.13	8.84	9.56	10.30	11.06	11.84	12.64	13.45	14.28	15.13	15.98	16.86	17.74
33.5	2.19	2.74	3.29	3.87	4.46	5.07	5.70	6.35	7.01	7.70	8.41	9.13	9.88	10.64	11.42	12.22	13.03	13.86	14.71	15.57	16.44	17.33	18.23
34.5	2.23	2.80	3.39	3.98	4.60	5.23	5.89	6.56	7.25	7.96	8.69	9.43	10.20	10.98	11.78	12.59	13.42	14.27	15.13	16.00	16.89	17.79	18.70
35.5	2.28	2.87	3.48	4.10	4.74	5.40	6.08	6.77	7.48	8.21	8.96	9.73	10.51	11.31	12.13	12.96	13.81	14.67	15.55	16.44	17.34	18.25	19.17
36.5	2.32	2.94	3.57	4.22	4.89	5.57	6.27	6.99	7.72	8.47	9.24	10.03	10.83	11.65	12.49	13.33	14.20	15.07	15.96	16.86	17.77	18.70	19.63
37.5	2.37	3.01	3.67	4.34	5.03	5.74	6.46	7.20	7.96	8.73	9.52	10.33	11.15	11.99	12.84	13.70	14.58	15.47	16.37	17.28	18.21	19.14	20.08
38.5	2.41	3.08	3.77	4.47	5.18	5.91	6.66	7.42	8.20	8.99	9.80	10.63	11.47	12.32	13.19	14.07	14.96	15.86	16.77	17.70	18.63	19.57	20.52
39.5	2.46	3.16	3.87	4.59	5.33	6.09	6.86	7.64	8.44	9.25	10.08	10.93	11.78	12.65	13.53	14.43	15.33	16.25	17.17	18.11	19.05	20.00	20.96
40.5	2.51	3.23	3.97	4.72	5.48	6.26	7.06	7.86	8.68	9.52	10.36	11.22	12.10	12.98	13.88	14.78	15.70	16.63	17.56	18.51	19.46	20.42	21.38
41.5	2.56	3.31	4.07	4.85	5.64	6.44	7.26	8.08	8.92	9.78	10.64	11.52	12.41	13.31	14.22	15.14	16.07	17.01	17.95	18.90	19.86	20.83	21.80
42.5	2.61	3.39	4.18	4.98	5.79	6.62	7.46	8.31	9.17	10.04	10.92	11.82	12.72	13.64	14.56	15.49	16.43	17.38	18.33	19.29	20.26	21.23	22.21
43.5	2.66	3.46	4.28	5.11	5.95	6.80	7.66	8.53	9.41	10.30	11.20	12.11	13.03	13.96	14.90	15.84	16.79	17.74	18.71	19.67	20.65	21.62	22.61
44.5	2.71	3.54	4.39	5.24	6.11	6.98	7.86	8.75	9.66	10.56	11.48	12.41	13.34	14.28	15.23	16.18	17.14	18.11	19.08	20.05	21.03	22.01	23.00
45.5	2.76	3.62	4.50	5.38	6.27	7.16	8.07	8.98	9.90	10.83	11.76	12.70	13.65	14.60	15.56	16.52	17.49	18.46	19.44	20.42	21.40	22.39	23.38
46.5	2.81	3.71	4.61	5.51	6.43	7.35	8.27	9.21	10.14	11.09	12.04	12.99	13.95	14.92	15.88	16.86	17.83	18.81	19.80	20.78	21.77	22.76	23.75
47.5	2.86	3.79	4.72	5.65	6.59	7.53	8.48	9.43	10.39	11.35	12.31	13.28	14.25	15.23	16.21	17.19	18.17	19.16	20.15	21.14	22.13	23.12	24.12
48.5	2.92	3.87	4.83	5.79	6.75	7.72	8.69	9.66	10.63	11.61	12.59	13.57	14.55	15.54	16.53	17.52	18.51	19.50	20.49	21.49	22.48	23.48	24.48
49.5	2.97	3.96	4.94	5.93	6.92	7.91	8.90	9.89	10.88	11.87	12.86	13.86	14.85	15.85	16.84	17.84	18.84	19.83	20.83	21.83	22.83	23.83	24.83
50.5	3.03	4.04	5.06	6.07	7.08	8.09	9.10	10.11	11.12	12.13	13.14	14.14	15.15	16.15	17.16	18.16	19.16	20.16	21.17	22.17	23.17	24.17	25.17
51.5	3.08	4.13	5.17	6.21	7.25	8.28	9.31	10.34	11.37	12.39	13.41	14.42	15.44	16.45	17.46	18.47	19.48	20.49	21.49	22.50	23.50	24.50	25.50
52.5	3.14	4.22	5.29	6.36	7.42	8.47	9.52	10.57	11.61	12.64	13.68	14.71	15.73	16.75	17.77	18.78	19.80	20.81	21.82	22.82	23.83	24.83	25.83
53.5	3.20	4.31	5.41	6.50	7.58	8.66	9.73	10.79	11.85	12.90	13.94	14.98	16.02	17.05	18.07	19.09	20.11	21.12	22.13	23.14	24.14	25.15	26.15
54.5	3.26	4.40	5.53	6.64	7.75	8.85	9.94	11.02	12.09	13.16	14.21	15.26	16.30	17.34	18.37	19.39	20.41	21.43	22.44	23.45	24.46	25.46	26.46
55.5	3.32	4.49	5.64	6.79	7.92	9.04	10.15	11.25	12.33	13.41	14.48	15.53	16.58	17.62	18.66	19.69	20.71	21.73	22.74	23.75	24.76	25.77	26.77
56.5	3.38	4.58	5.77	6.94	8.09	9.23	10.36	11.47	12.57	13.66	14.74	15.80	16.86	17.91	18.95	19.98	21.01	22.03	23.04	24.05	25.06	26.06	27.06
57.5	3.44	4.67	5.89	7.08	8.26	9.43	10.57	11.70	12.81	13.91	15.00	16.07	17.14	18.19	19.23	20.27	21.30	22.32	23.34	24.35	25.35	26.36	27.35
58.5	3.50	4.76	6.01	7.23	8.44	9.62	10.78	11.93	13.05	14.16	15.26	16.34	17.41	18.47	19.51	20.55	21.58	22.61	23.62	24.63	25.64	26.64	27.64
59.5	3.56	4.86	6.13	7.38	8.61	9.81	10.99	12.15	13.29	14.41	15.51	16.60	17.68	18.74	19.79	20.83	21.86	22.89	23.90	24.91	25.92	26.92	27.92
60.5	3.62	4.95	6.26	7.53	8.78	10.00	11.20	12.37	13.52	14.66	15.77	16.86	17.94	19.01	20.06	21.11	22.14	23.16	24.18	25.19	26.19	27.19	28.19
61.5	3.69	5.05	6.38	7.68	8.95	10.20	11.41	12.60	13.76	14.90	16.02	17.12	18.21	19.28	20.33	21.38	22.41	23.43	24.45	25.46	26.46	27.46	28.45
62.5	3.75	5.15	6.51	7.83	9.13	10.39	11.62	12.82	13.99	15.14	16.27	17.38	18.47	19.54	20.60	21.64	22.68	23.70	24.72	25.72	26.72	27.72	28.71
63.5	3.81	5.24	6.63	7.99	9.30	10.58	11.83	13.04	14.23	15.38	16.52	17.63	18.72	19.80	20.86	21.90	22.94	23.96	24.98	25.98	26.98	27.97	28.96
64.5	3.88	5.34	6.76	8.14	9.48	10.77	12.03	13.26	14.46	15.62	16.76	17.88	18.98	20.05	21.11	22.16	23.19	24.22	25.23	26.23	27.23	28.22	29.21
65.5	3.95	5.44	6.89	8.29	9.65	10.97	12.24	13.48	14.69	15.86	17.01	18.13	19.23	20.31	21.37	22.41	23.45	24.47	25.48	26.48	27.48	28.47	29.45
66.5	4.01	5.54	7.02	8.45	9.83	11.16	12.45	13.70	14.91	16.10	17.25	18.37	19.47	20.55	21.62	22.66	23.70	24.72	25.72	26.72	27.72	28.70	29.68
67.5	4.08	5.64	7.15	8.60	10.00	11.35	12.66	13.92	15.14	16.33	17.48	18.61	19.72	20.80	21.86	22.91	23.94	24.96	25.96	26.96	27.95	28.93	29.91
68.5	4.15	5.74	7.28	8.75	10.18	11.54	12.86	14.13	15.37	16.56	17.72	18.85	19.96	21.04	22.10	23.15	24.18	25.19	26.20	27.20	28.18	29.16	30.14
69.5	4.22	5.84	7.41	8.91	10.35	11.73	13.07	14.35	15.59	16.79	17.95	19.09	20.20	21.28	22.34	23.38	24.41	25.43	26.43	27.42	28.41	29.38	30.35
70.5	4.28	5.95	7.54	9.07	10.53	11.93	13.27	14.56	15.81	17.02	18.19	19.32	20.43	21.51	22.57	23.62	24.64	25.66	26.66	27.65	28.63	29.60	30.57
71.5	4.35	6.05	7.67	9.22	10.70	12.12	13.47	14.78	16.03	17.24	18.41	19.55	20.66	21.74	22.80	23.85	24.87	25.88	26.88	27.86	28.84	29.81	30.78
72.5	4.42	6.15	7.80	9.38	10.88	12.31	13.68	14.99	16.25	17.46	18.64	19.78	20.89	21.97	23.03	24.07	25.09	26.10	27.09	28.08	29.05	30.02	30.98
73.5	4.49	6.26	7.94	9.53	11.05	12.50	13.88	15.20	16.47	17.69	18.86	20.00	21.11	22.20	23.25	24.29	25.31	26.31	27.31	28.29	29.26	30.22	31.18
74.5	4.57	6.36	8.07	9.69	11.23	12.69	14.08	15.41	16.68	17.90	19.08	20.23	21.34	22.42	23.47	24.51	25.52	26.53	27.51	28.49	29.46	30.42	31.37
75.5	4.64	6.47	8.20	9.85	11.40	12.88	14.28	15.61	16.89	18.12	19.30	20.45	21.55	22.63	23.69	24.72	25.73	26.73	27.72	28.69	29.66	30.61	31.56
76.5	4.71	6.57	8.34	10.00	11.58	13.06	14.48	15.82	17.10	18.33	19.52	20.66	21.77	22.85	23.90	24.93	25.94	26.94	27.92	28.89	29.85	30.80	31.75
77.5	4.78	6.68	8.47	10.16	11.75	13.25	14.67	16.03	17.31	18.55	19.73	20.88	21.98	23.06	24.11	25.14	26.14	27.14	28.11	29.08	30.04	30.99	31.93
78.5	4.86	6.79	8.61	10.32	11.92	13.44	14.87	16.23	17.52	18.76	19.94	21.09	22.19	23.27	24.31	25.34	26.34	27.33	28.31	29.27	30.22	31.17	32.11
79.5	4.93	6.90	8.74	10.47	12.10	13.63	15.07	16.43	17.73	18.97	20.15	21.29	22.40	23.47	24.51	25.54	26.54	27.52	28.49	29.45	30.40	31.35	32.28
80.5	5.00	7.00	8.88	10.63	12.27	13.81	15.26	16.63	17.93	19.17	20.36	21.50	22.60	23.67	24.71	25.73	26.73	27.71	28.68	29.63	30.58	31.52	32.45
81.5	5.08	7.11	9.01	10.79	12.44	14.00	15.46	16.83	18.13	19.37	20.56	21.70	22.80	23.87	24.91	25.92	26.92	27.89	28.86	29.81	30.75	31.69	32.62
82.5	5.15	7.22	9.15	10.94	12.62	14.18	15.65	17.03	18.33	19.58	20.76	21.90	23.00	24.06	25.10	26.11	27.10	28.08	29.03	29.98	30.92	31.85	32.78
83.5	5.23	7.33	9.29	11.10	12.79	14.36	15.84	17.22	18.53	19.78	20.96	22.10	23.19	24.26	25.29	26.30	27.28	28.25	29.21	30.15	31.09	32.01	32.94
84.5	5.31	7.44	9.42	11.26	12.96	14.55	16.03	17.42	18.73	19.97	21.16	22.29	23.39	24.44	25.47	26.48	27.46	28.43	29.38	30.32	31.25	32.17	33.09
85.5	5.38	7.55	9.56	11.42	13.13	14.73	16.22	17.61	18.92	20.17	21.35	22.48	23.58	24.63	25.66	26.66	27.63	28.60	29.54	30.48	31.41	32.33	33.24
86.5	5.46	7.66	9.70	11.57	13.30	14.91	16.40	17.80	19.12	20.36	21.54	22.67	23.76	24.81	25.83	26.83	27.81	28.76	29.71	30.64	31.56	32.48	33.39
87.5	5.54	7.78	9.83	11.73	13.48	15.09	16.59	17.99	19.31	20.55	21.73	22.86	23.94	24.99	26.01	27.00	27.97	28.93	29.87	30.80	31.72	32.63	33.53
88.5	5.62	7.89	9.97	11.89	13.65	15.27	16.78	18.18	19.50	20.74	21.92	23.04	24.13	25.17	26.18	27.17	28.14	29.09	30.02	30.95	31.86	32.77	33.67
89.5	5.70	8.00	10.11	12.04	13.81	15.45	16.96	18.37	19.68	20.92	22.10	23.23	24.30	25.34	26.35	27.34	28.30	29.25	30.18	31.10	32.01	32.91	33.81

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A3. White spruce height and site index prediction table in subregion 11 (continued).

Bhage* (years)	Site index (m) at 50 years Bhage																						
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
90.5	5.77	8.11	10.25	12.20	13.98	15.63	17.14	18.55	19.87	21.11	22.28	23.40	24.48	25.52	26.52	27.50	28.46	29.40	30.33	31.25	32.15	33.05	33.95
91.5	5.85	8.22	10.38	12.35	14.15	15.80	17.32	18.73	20.05	21.29	22.46	23.58	24.65	25.68	26.69	27.66	28.62	29.55	30.48	31.39	32.29	33.19	34.08
92.5	5.93	8.34	10.52	12.51	14.32	15.98	17.50	18.92	20.23	21.47	22.64	23.75	24.82	25.85	26.85	27.82	28.77	29.70	30.62	31.53	32.43	33.32	34.21
93.5	6.01	8.45	10.66	12.66	14.49	16.15	17.68	19.10	20.41	21.65	22.82	23.93	24.99	26.01	27.01	27.97	28.92	29.85	30.76	31.67	32.56	33.45	34.34
94.5	6.09	8.56	10.80	12.82	14.65	16.33	17.86	19.27	20.59	21.82	22.99	24.10	25.15	26.17	27.16	28.13	29.07	29.99	30.90	31.80	32.69	33.58	34.46
95.5	6.18	8.68	10.94	12.97	14.82	16.50	18.03	19.45	20.77	22.00	23.16	24.26	25.32	26.33	27.32	28.28	29.21	30.13	31.04	31.94	32.82	33.70	34.58
96.5	6.26	8.79	11.07	13.13	14.98	16.67	18.21	19.63	20.94	22.17	23.33	24.43	25.48	26.49	27.47	28.42	29.35	30.27	31.17	32.07	32.95	33.83	34.70
97.5	6.34	8.91	11.21	13.28	15.15	16.84	18.38	19.80	21.11	22.34	23.49	24.59	25.63	26.64	27.62	28.57	29.49	30.41	31.30	32.19	33.07	33.95	34.82
98.5	6.42	9.02	11.35	13.44	15.31	17.01	18.55	19.97	21.28	22.51	23.66	24.75	25.79	26.79	27.76	28.71	29.63	30.54	31.43	32.32	33.19	34.06	34.93
99.5	6.50	9.14	11.49	13.59	15.48	17.18	18.72	20.14	21.45	22.67	23.82	24.91	25.94	26.94	27.91	28.85	29.77	30.67	31.56	32.44	33.31	34.18	35.04
100.5	6.59	9.25	11.62	13.74	15.64	17.34	18.89	20.31	21.62	22.83	23.98	25.06	26.09	27.09	28.05	28.98	29.90	30.80	31.68	32.56	33.43	34.29	35.15
101.5	6.67	9.37	11.76	13.89	15.80	17.51	19.06	20.48	21.78	23.00	24.14	25.21	26.24	27.23	28.19	29.12	30.03	30.92	31.81	32.68	33.54	34.40	35.26
102.5	6.75	9.48	11.90	14.05	15.96	17.68	19.23	20.64	21.95	23.16	24.29	25.36	26.39	27.37	28.32	29.25	30.16	31.05	31.92	32.79	33.65	34.51	35.36
103.5	6.84	9.60	12.04	14.20	16.12	17.84	19.39	20.81	22.11	23.31	24.44	25.51	26.53	27.51	28.46	29.38	30.28	31.17	32.04	32.91	33.76	34.62	35.47
104.5	6.92	9.71	12.17	14.35	16.28	18.00	19.56	20.97	22.27	23.47	24.60	25.66	26.67	27.65	28.59	29.51	30.40	31.29	32.16	33.02	33.87	34.72	35.57
105.5	7.01	9.83	12.31	14.50	16.44	18.16	19.72	21.13	22.42	23.62	24.74	25.80	26.81	27.78	28.72	29.63	30.53	31.40	32.27	33.13	33.98	34.82	35.66
106.5	7.09	9.95	12.45	14.65	16.59	18.32	19.88	21.29	22.58	23.77	24.89	25.95	26.95	27.92	28.85	29.76	30.64	31.52	32.38	33.23	34.08	34.92	35.76
107.5	7.18	10.06	12.59	14.80	16.75	18.48	20.04	21.45	22.73	23.92	25.04	26.09	27.09	28.05	28.97	29.88	30.76	31.63	32.49	33.34	34.18	35.02	35.86
108.5	7.26	10.18	12.72	14.95	16.91	18.64	20.20	21.60	22.89	24.07	25.18	26.23	27.22	28.17	29.10	30.00	30.88	31.74	32.59	33.44	34.28	35.11	35.95
109.5	7.35	10.29	12.86	15.10	17.06	18.80	20.35	21.76	23.04	24.22	25.32	26.36	27.35	28.30	29.22	30.11	30.99	31.85	32.70	33.54	34.38	35.21	36.04
110.5	7.43	10.41	12.99	15.24	17.22	18.96	20.51	21.91	23.19	24.36	25.46	26.50	27.48	28.43	29.34	30.23	31.10	31.96	32.80	33.64	34.47	35.30	36.13
111.5	7.52	10.53	13.13	15.39	17.37	19.11	20.66	22.06	23.33	24.51	25.60	26.63	27.61	28.55	29.46	30.34	31.21	32.06	32.90	33.74	34.56	35.39	36.21
112.5	7.61	10.64	13.27	15.54	17.52	19.26	20.81	22.21	23.48	24.65	25.73	26.76	27.73	28.67	29.57	30.45	31.31	32.16	33.00	33.83	34.66	35.48	36.30
113.5	7.69	10.76	13.40	15.69	17.67	19.42	20.97	22.36	23.62	24.79	25.87	26.89	27.86	28.79	29.69	30.56	31.42	32.26	33.10	33.92	34.75	35.57	36.38
114.5	7.78	10.88	13.54	15.83	17.82	19.57	21.12	22.50	23.76	24.92	26.00	27.02	27.98	28.90	29.80	30.67	31.52	32.36	33.19	34.02	34.84	35.65	36.47
115.5	7.87	10.99	13.67	15.98	17.97	19.72	21.26	22.65	23.90	25.06	26.13	27.14	28.10	29.02	29.91	30.78	31.62	32.46	33.29	34.11	34.92	35.73	36.55
116.5	7.95	11.11	13.81	16.12	18.12	19.87	21.41	22.79	24.04	25.19	26.26	27.26	28.22	29.13	30.02	30.88	31.72	32.56	33.38	34.19	35.01	35.82	36.63
117.5	8.04	11.23	13.94	16.26	18.27	20.02	21.56	22.93	24.18	25.32	26.39	27.39	28.33	29.24	30.12	30.98	31.82	32.65	33.47	34.28	35.09	35.90	36.70
118.5	8.13	11.34	14.08	16.41	18.42	20.16	21.70	23.07	24.32	25.46	26.51	27.51	28.45	29.35	30.23	31.08	31.92	32.74	33.56	34.37	35.17	35.98	36.78
119.5	8.22	11.46	14.21	16.55	18.56	20.31	21.84	23.21	24.45	25.58	26.64	27.62	28.56	29.46	30.33	31.18	32.01	32.83	33.64	34.45	35.25	36.05	36.85
120.5	8.31	11.58	14.34	16.69	18.71	20.45	21.99	23.35	24.58	25.71	26.76	27.74	28.67	29.57	30.43	31.28	32.11	32.92	33.73	34.53	35.33	36.13	36.93
121.5	8.39	11.69	14.48	16.83	18.85	20.60	22.13	23.49	24.71	25.84	26.88	27.85	28.78	29.67	30.53	31.37	32.20	33.01	33.81	34.61	35.41	36.20	37.00
122.5	8.48	11.81	14.61	16.97	18.99	20.74	22.27	23.62	24.84	25.96	27.00	27.97	28.89	29.78	30.63	31.47	32.29	33.10	33.90	34.69	35.49	36.28	37.07
123.5	8.57	11.93	14.74	17.11	19.14	20.88	22.40	23.76	24.97	26.08	27.11	28.08	29.00	29.88	30.73	31.56	32.38	33.18	33.98	34.77	35.56	36.35	37.14
124.5	8.66	12.04	14.87	17.25	19.28	21.02	22.54	23.89	25.10	26.20	27.23	28.19	29.10	29.98	30.83	31.65	32.46	33.26	34.06	34.85	35.63	36.42	37.21
125.5	8.75	12.16	15.00	17.39	19.42	21.16	22.68	24.02	25.22	26.32	27.34	28.30	29.21	30.08	30.92	31.74	32.55	33.35	34.14	34.92	35.71	36.49	37.27
126.5	8.84	12.28	15.14	17.53	19.56	21.30	22.81	24.15	25.35	26.44	27.46	28.41	29.31	30.17	31.01	31.83	32.63	33.43	34.21	35.00	35.78	36.56	37.34
127.5	8.93	12.39	15.27	17.67	19.70	21.43	22.94	24.28	25.47	26.56	27.57	28.51	29.41	30.27	31.10	31.92	32.72	33.51	34.29	35.07	35.85	36.62	37.40
128.5	9.02	12.51	15.40	17.80	19.83	21.57	23.07	24.40	25.59	26.67	27.68	28.62	29.51	30.36	31.19	32.00	32.80	33.58	34.36	35.14	35.91	36.69	37.47
129.5	9.11	12.63	15.53	17.94	19.97	21.70	23.20	24.53	25.71	26.79	27.78	28.72	29.60	30.46	31.28	32.09	32.88	33.66	34.44	35.21	35.98	36.75	37.53
130.5	9.20	12.74	15.66	18.07	20.11	21.84	23.33	24.65	25.83	26.90	27.89	28.82	29.70	30.55	31.37	32.17	32.96	33.73	34.51	35.28	36.05	36.82	37.59
131.5	9.29	12.86	15.78	18.21	20.24	21.97	23.46	24.77	25.94	27.01	28.00	28.92	29.79	30.64	31.45	32.25	33.03	33.81	34.58	35.35	36.11	36.88	37.65
132.5	9.38	12.97	15.91	18.34	20.38	22.10	23.59	24.89	26.06	27.12	28.10	29.02	29.89	30.72	31.54	32.33	33.11	33.88	34.65	35.41	36.18	36.94	37.71
133.5	9.47	13.09	16.04	18.48	20.51	22.23	23.71	25.01	26.17	27.23	28.20	29.11	29.98	30.81	31.62	32.41	33.18	33.95	34.72	35.48	36.24	37.00	37.77
134.5	9.56	13.20	16.17	18.61	20.64	22.36	23.84	25.13	26.29	27.34	28.30	29.21	30.07	30.90	31.70	32.49	33.26	34.02	34.78	35.54	36.30	37.06	37.82
135.5	9.65	13.32	16.30	18.74	20.77	22.49	23.96	25.25	26.40	27.44	28.40	29.30	30.16	30.98	31.78	32.56	33.33	34.09	34.85	35.60	36.36	37.12	37.88
136.5	9.74	13.43	16.42	18.87	20.90	22.61	24.08	25.36	26.51	27.54	28.50	29.40	30.25	31.07	31.86	32.64	33.40	34.16	34.91	35.67	36.42	37.17	37.93
137.5	9.83	13.55	16.55	19.00	21.03	22.74	24.20	25.48	26.62	27.65	28.60	29.49	30.33	31.15	31.94	32.71	33.47	34.23	34.98	35.73	36.48	37.23	37.99
138.5	9.93	13.66	16.68	19.13	21.16	22.86	24.32	25.59	26.72	27.75	28.69	29.58	30.42	31.23	32.01	32.78	33.54	34.29	35.04	35.79	36.54	37.29	38.04
139.5	10.02	13.78	16.80	19.26	21.29	22.99	24.44	25.71	26.83	27.85	28.79	29.67	30.50	31.31	32.09	32.86	33.61	34.36	35.10	35.85	36.59	37.34	38.09
140.5	10.11	13.89	16.93	19.39	21.41	23.11	24.56	25.82	26.94	27.95	28.88	29.76	30.59	31.39	32.16	32.93	33.68	34.42	35.16	35.90	36.65	37.39	38.14
141.5	10.20	14.01	17.05	19.51	21.54	23.23	24.67	25.93	27.04	28.05	28.97	29.84	30.67	31.46	32.24	33.00	33.74	34.48	35.22	35.96	36.70	37.45	38.19
142.5	10.29	14.12	17.18	19.64	21.66	23.35	24.79	26.03	27.14	28.14	29.07	29.93	30.75	31.54	32.31	33.06	33.81	34.55	35.28	36.02	36.76	37.50	38.24
143.5	10.38	14.23	17.30	19.77	21.79	23.47	24.90	26.14	27.24	28.24	29.16	30.01	30.83	31.62	32.38	33.13	33.87	34.61	35.34	36.07	36.81	37.55	38.29
144.5	10.47	14.35	17.42	19.89	21.91	23.59	25.01	26.25	27.34	28.33	29.24	30.10	30.91	31.69	32.45	33.20	33.93	34.67	35.40	36.13	36.86	37.60	38.34
145.5	10.56	14.46	17.55	20.02	22.03	23.70	25.12	26.35	27.44	28.43	29.33	30.18	30.99	31.76	32.52	33.26	34.00	34.73	35.45	36.18	36.91	37.65	38.38
146.5	10.66	14.58	17.67	20.14	22.15	23.82	25.23	26.46	27.54	28.52	29.42	30.26	31.06	31.84	32.59	33.33	34.06	34.78	35.51	36.23	36.96	37.69	38.43
147.5	10.75	14.69	17.79	20.26	22.27	23.94	25.34	26.56	27.64	28.61	29.50	30.34	31.14	31.91	32.66	33.39	34.12	34.84	35.56	36.29	37.01	37.74	38.48
148.5	10.84	14.80	17.91	20.39	22.39	24.05	25.45	26.66	27.73	28.70	29.59	30.42	31.21	31.98	32.72	33.45	34.18	34.90	35.62	36.34	37.06	37.79	38.52
149.5	10.93	14.91	18.03	20.51	22.51	24.16	25.56	26.76	27.83	28.79	29.67	30.50	31.29	32.05	32.79	33.51	34.24	34.95	35.67	36.39	37.11	37.83	38.56
150.5	11.02	15.03	18.15	20.63	22.63	24.28	25.66	26.86	27.92	28.87	29.75	30.57	31.36	32.11	32.85	33.58	34.29	35.01	35.72	36.44	37.16	37.88	38.61
151.5	11.11	15.14	18.27	20.75	22.74	24.39	25.77	26.96	28.01	28.96	29.83	30.65	31.43	32.18	32.91	33.64	34.35	35.06	35.77	36.48	37.20	37.92	38.65
152.5	11.21	15.25	18.39	20.87	22.86	24.50	25.87	27.06	28.10	29.05	29.91	30.73	31.50	32.25	32.98	33.69	34.41	35.11	35.82	36.53	37.25	37.97	38.69
153.5	11.30	15.36	18.51	20.98	22.97	24.61	25.98	27.16	28.19	29.13	29.99	30.80	31.57	32.31	33.04	33.75	34.46	35.17	35.87	36.58	37.29	38.01	38.73
154.5	11.39	15.47	18.62	21.10	23.09	24.71	26.08	27.25	28.28	29.21	30.07	30.87	31.64	32.38	33.10	33.81	34.51	35.22	35.92	36.63	37.34	38.05	38.77
155.5	11.48	15.58	18.74	21.22	23.20	24.82	26.18	27.34	28.37	29.30	30.15	30.94	31.70	32.44	33.16	33.87	34.57	35.27	35.97	36.67	37.38	38.09	38.81
156.5	11.57	15.69	18.86	21.34	23.31	24.93	26.28	27.44	28.46	29.38	30.22	31.02	31.77	32.50	33.22	33.92	34.62	35.32	36.02	36.72	37.42	38.13	38.85
157.5	11.67	15.80	18.98	21.45	23.42	25.03	26.38	27.53	28.54	29.46	30.30	31.09	31.84	32.56	33.27	33.98	34.67	35.37	36.06	36.76	37.47	38.17	38.89
158.5	11.76	15.91	19.09	21.57	23.53	25.14	26.48	27.62	28.63	29.54	30.37	31.15	31.90	32.62	33.33	34.03	34.72	35.41	36.11	36.80	37.51	38.21	38.93
159.5	11.85	16.02	19.21	21.68	23.64	25.24	26.57	27.71	28.71	29.61	30.44	31.22	31.97	32.68	33.39	34.08	34.77	35.46	36.15	36.85	37.55	38.25	38.97
160.5	11.94	16.13	19.32	21.79	23.75	25.34	26.67	27.80	28.80	29.69	30.52	31.29	32.03	32.74	33.44	34.14	34.82	35.51	36.20	36.89	37.59	38.29	39.00
161.5	12.03	16.24	19.44	21.91	23.86	25.44	26.76	27.89	28.88	29.77	30.59	31.36	32.09	32.80	33.50	34.19	34.87	35.56	36.24	36.93	37.63	38.33	39.04
162.5	12.12	16.35	19.55	22.02	23.97	25.55	26.86	27.98	28.96	29.84	30.66	31.42	32.15	32.86	33.55	34.24	34.92	35.60	36.28	36.97	37.67	38.37	39.08
163.5	12.22	16.46	19.66	22.13	24.07	25.65	26.95	28.06	29.04	29.92	30.73	31.49	32.21	32.92	33.61	34.29	34.97	35.65	36.33	37.01	37.71	38.40	39.11
164.5	12.31	16.57	19.77	22.24	24.18	25.74	27.04	28.15	29.12	29.99	30.80	31.55	32.27	32.97	33.66	34.34	35.01	35.69	36.37	37.05	37.74	38.44	39.15
165.5	12.40	16.68	19.89	22.35	24.28	25.84	27.13	28.23	29.20	30.07	30.86	31.61	32.33	33.03	33.71	34.39	35.06	35.73	36.41	37.09	37.78	38.48	39.18
166.5	12.49	16.78	20.00	22.46	24.39	25.94	27.22	28.32	29.28	30.14	30.93	31.68	32.39	33.08	33.76	34.43	35.10	35.78	36.45	37.13	37.82	38.51	39.21
167.5	12.58	16.89	20.11	22.57	24.49	26.04	27.31	28.40	29.35	30.21	31.00	31.74	32.45	33.14	33.81	34.48	35.15	35.82	36.49	37.17	37.85	38.55	39.25
168.5	12.67	17.00	20.22	22.67	24.59	26.13	27.40	28.48	29.43	30.28	31.06	31.80	32.50	33.19	33.86	34.53	35.19	35.86	36.53	37.21	37.89	38.58	39.28
169.5	12.77	17.10	20.33	22.78	24.69	26.23	27.49	28.56	29.50	30.35	31.13	31.86	32.56	33.24	33.91	34.57	35.24	35.90	36.57	37.24	37.92	38.61	39.31
170.5	12.86	17.21	20.44	22.89	24.79	26.32	27.58	28.65	29.58	30.42	31.19	31.92	32.62	33.29	33.96	34.62	35.28	35.94	36.61	37.28	37.96	38.65	39.34
171.5	12.95	17.32	20.55	22.99	24.89	26.41	27.66	28.72	29.65	30.49	31.25	31.98	32.67	33.34	34.01	34.67	35.32	35.98	36.65	37.32	37.99	38.68	39.37
172.5	13.04	17.42	20.65	23.10	24.99	26.50	27.75	28.80	29.72	30.55	31.32	32.03	32.72	33.39	34.05	34.71	35.36	36.02	36.68	37.35	38.03	38.71	39.40
173.5	13.13	17.53	20.76	23.20	25.09	26.60	27.83	28.88	29.80	30.62	31.38	32.09	32.78	33.44	34.10	34.75	35.41	36.06	36.72	37.39	38.06	38.74	39.43
174.5	13.22	17.63	20.87	23.30	25.19	26.69	27.92	28.96	29.87	30.68	31.44	32.15	32.83	33.49	34.15	34.80	35.45	36.10	36.76	37.42	38.09	38.77	39.46
175.5	13.31	17.74	20.97	23.41	25.28	26.78	28.00	29.03	29.94	30.75	31.50	32.20	32.88	33.54	34.19	34.84	35.49	36.14	36.79	37.45	38.13	38.80	39.49
176.5	13.40	17.84	21.08	23.51	25.38	26.86	28.08	29.11	30.01	30.81	31.56	32.26	32.93	33.59	34.24	34.88	35.53	36.17	36.83	37.49	38.16	38.84	39.52
177.5	13.49	17.94	21.19	23.61	25.47	26.95	28.16	29.18	30.08	30.88	31.62	32.31	32.98	33.64	34.28	34.92	35.56	36.21	36.86	37.52	38.19	38.87	39.55
178.5	13.59	18.05	21.29	23.71	25.57	27.04	28.24	29.26	30.14	30.94	31.67	32.37	33.03	33.68	34.32	34.96	35.60	36.25	36.90	37.55	38.22	38.89	39.58
179.5	13.68	18.15	21.39	23.81	25.66	27.13	28.32	29.33	30.21	31.00	31.73	32.42	33.08	33.73	34.37	35.00	35.64	36.28	36.93	37.59	38.25	38.92	39.61

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A4. Provincial white spruce height and site index prediction table.

Bhage*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	.10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
2.5	1.35	1.39	1.42	1.46	1.50	1.54	1.59	1.64	1.69	1.75	1.81	1.88	1.95	2.02	2.10	2.18	2.27	2.37	2.46	2.57	2.68	2.79	2.92
3.5	1.36	1.40	1.45	1.49	1.54	1.60	1.65	1.72	1.78	1.85	1.92	2.00	2.09	2.18	2.27	2.37	2.48	2.59	2.71	2.84	2.97	3.11	3.26
4.5	1.38	1.43	1.48	1.53	1.59	1.66	1.72	1.80	1.88	1.96	2.05	2.14	2.24	2.35	2.46	2.58	2.71	2.84	2.98	3.13	3.29	3.45	3.62
5.5	1.39	1.45	1.51	1.58	1.65	1.72	1.80	1.89	1.98	2.07	2.18	2.29	2.41	2.53	2.66	2.80	2.95	3.10	3.27	3.44	3.62	3.81	4.01
6.5	1.41	1.47	1.54	1.62	1.70	1.79	1.88	1.98	2.09	2.20	2.32	2.45	2.58	2.72	2.88	3.04	3.21	3.39	3.57	3.77	3.98	4.20	4.43
7.5	1.42	1.50	1.58	1.67	1.76	1.86	1.97	2.08	2.20	2.33	2.47	2.61	2.77	2.93	3.10	3.29	3.48	3.68	3.90	4.12	4.36	4.60	4.86
8.5	1.44	1.53	1.62	1.72	1.83	1.94	2.06	2.19	2.33	2.47	2.63	2.79	2.97	3.15	3.34	3.55	3.77	4.00	4.23	4.49	4.75	5.03	5.31
9.5	1.46	1.56	1.66	1.77	1.89	2.02	2.16	2.30	2.46	2.62	2.79	2.98	3.17	3.38	3.60	3.83	4.07	4.32	4.59	4.87	5.16	5.47	5.78
10.5	1.48	1.59	1.71	1.83	1.97	2.11	2.26	2.42	2.59	2.78	2.97	3.17	3.39	3.62	3.86	4.11	4.38	4.66	4.95	5.26	5.58	5.92	6.27
11.5	1.50	1.62	1.75	1.89	2.04	2.20	2.37	2.55	2.74	2.94	3.15	3.38	3.62	3.87	4.13	4.41	4.70	5.01	5.33	5.67	6.02	6.39	6.77
12.5	1.52	1.65	1.80	1.96	2.12	2.29	2.48	2.68	2.89	3.11	3.34	3.59	3.85	4.13	4.42	4.72	5.04	5.37	5.72	6.09	6.47	6.86	7.28
13.5	1.54	1.69	1.85	2.02	2.20	2.39	2.60	2.81	3.04	3.28	3.54	3.81	4.09	4.39	4.71	5.04	5.38	5.74	6.12	6.52	6.93	7.35	7.80
14.5	1.56	1.73	1.91	2.09	2.29	2.50	2.72	2.96	3.20	3.47	3.74	4.04	4.34	4.67	5.01	5.36	5.74	6.13	6.53	6.95	7.39	7.85	8.32
15.5	1.59	1.77	1.96	2.16	2.38	2.61	2.85	3.10	3.37	3.66	3.96	4.27	4.60	4.95	5.32	5.70	6.10	6.51	6.95	7.40	7.87	8.35	8.86
16.5	1.61	1.81	2.02	2.24	2.47	2.72	2.98	3.25	3.54	3.85	4.17	4.51	4.87	5.24	5.63	6.04	6.47	6.91	7.37	7.85	8.35	8.86	9.40
17.5	1.64	1.85	2.08	2.32	2.57	2.83	3.11	3.41	3.72	4.05	4.40	4.76	5.14	5.54	5.95	6.39	6.84	7.31	7.80	8.31	8.83	9.38	9.94
18.5	1.67	1.90	2.14	2.40	2.67	2.95	3.25	3.57	3.90	4.26	4.62	5.01	5.42	5.84	6.28	6.74	7.22	7.72	8.24	8.77	9.32	9.90	10.49
19.5	1.69	1.94	2.20	2.48	2.77	3.08	3.40	3.74	4.09	4.47	4.86	5.27	5.70	6.15	6.61	7.10	7.61	8.13	8.67	9.24	9.82	10.42	11.03
20.5	1.72	1.99	2.27	2.57	2.88	3.20	3.54	3.91	4.28	4.68	5.10	5.53	5.99	6.46	6.95	7.46	8.00	8.55	9.12	9.70	10.31	10.94	11.58
21.5	1.75	2.04	2.34	2.65	2.98	3.33	3.70	4.08	4.48	4.90	5.34	5.80	6.28	6.78	7.29	7.83	8.39	8.96	9.56	10.17	10.81	11.46	12.13
22.5	1.79	2.09	2.41	2.74	3.10	3.46	3.85	4.26	4.68	5.12	5.59	6.07	6.57	7.10	7.64	8.20	8.78	9.38	10.01	10.64	11.30	11.98	12.67
23.5	1.82	2.14	2.48	2.84	3.21	3.60	4.01	4.44	4.88	5.35	5.84	6.35	6.87	7.42	7.99	8.57	9.18	9.81	10.45	11.12	11.80	12.50	13.21
24.5	1.85	2.20	2.56	2.93	3.33	3.74	4.17	4.62	5.09	5.58	6.09	6.62	7.18	7.75	8.34	8.95	9.58	10.23	10.90	11.58	12.29	13.01	13.75
25.5	1.89	2.25	2.63	3.03	3.45	3.88	4.34	4.81	5.30	5.82	6.35	6.91	7.48	8.08	8.69	9.33	9.98	10.65	11.34	12.05	12.78	13.52	14.28
26.5	1.92	2.31	2.71	3.13	3.57	4.03	4.50	5.00	5.52	6.05	6.61	7.19	7.79	8.41	9.05	9.70	10.38	11.08	11.79	12.52	13.27	14.03	14.81
27.5	1.96	2.37	2.79	3.23	3.69	4.17	4.67	5.19	5.73	6.29	6.88	7.48	8.10	8.74	9.40	10.08	10.78	11.50	12.23	12.98	13.75	14.54	15.34
28.5	1.99	2.42	2.87	3.34	3.82	4.32	4.85	5.39	5.95	6.54	7.14	7.77	8.41	9.07	9.76	10.46	11.18	11.92	12.67	13.44	14.23	15.03	15.85
29.5	2.03	2.49	2.96	3.44	3.95	4.48	5.02	5.59	6.18	6.78	7.41	8.06	8.72	9.41	10.11	10.84	11.58	12.34	13.11	13.90	14.71	15.53	16.36
30.5	2.07	2.55	3.04	3.55	4.08	4.63	5.20	5.79	6.40	7.03	7.68	8.35	9.04	9.75	10.47	11.21	11.97	12.75	13.54	14.35	15.18	16.01	16.86
31.5	2.11	2.61	3.13	3.66	4.22	4.79	5.38	6.00	6.63	7.28	7.95	8.64	9.35	10.08	10.83	11.59	12.37	13.16	13.98	14.80	15.64	16.49	17.36
32.5	2.15	2.68	3.22	3.77	4.35	4.95	5.57	6.20	6.86	7.53	8.23	8.94	9.67	10.42	11.18	11.96	12.76	13.57	14.40	15.24	16.10	16.97	17.85
33.5	2.19	2.74	3.31	3.89	4.49	5.11	5.75	6.41	7.09	7.78	8.50	9.23	9.98	10.75	11.54	12.34	13.15	13.98	14.83	15.68	16.55	17.43	18.33
34.5	2.24	2.81	3.40	4.01	4.63	5.28	5.94	6.62	7.32	8.04	8.77	9.53	10.30	11.09	11.89	12.71	13.54	14.38	15.24	16.11	17.00	17.89	18.80
35.5	2.28	2.88	3.49	4.12	4.77	5.44	6.13	6.83	7.55	8.29	9.05	9.82	10.61	11.42	12.24	13.07	13.92	14.78	15.66	16.54	17.44	18.34	19.26
36.5	2.32	2.95	3.59	4.24	4.92	5.61	6.32	7.04	7.79	8.55	9.33	10.12	10.93	11.75	12.59	13.44	14.30	15.18	16.06	16.96	17.87	18.79	19.71
37.5	2.37	3.02	3.68	4.36	5.06	5.78	6.51	7.26	8.02	8.81	9.60	10.41	11.24	12.08	12.93	13.80	14.68	15.57	16.47	17.38	18.30	19.22	20.16
38.5	2.41	3.09	3.78	4.49	5.21	5.95	6.70	7.48	8.26	9.06	9.88	10.71	11.55	12.41	13.28	14.16	15.05	15.95	16.86	17.79	18.71	19.65	20.60
39.5	2.46	3.16	3.88	4.61	5.36	6.12	6.90	7.69	8.50	9.32	10.15	11.00	11.86	12.74	13.62	14.51	15.42	16.33	17.26	18.19	19.13	20.07	21.03
40.5	2.51	3.24	3.98	4.74	5.51	6.30	7.10	7.91	8.74	9.58	10.43	11.30	12.17	13.06	13.96	14.87	15.78	16.71	17.64	18.58	19.53	20.48	21.44
41.5	2.56	3.31	4.08	4.87	5.66	6.47	7.29	8.13	8.98	9.83	10.71	11.59	12.48	13.38	14.29	15.21	16.14	17.08	18.02	18.97	19.93	20.89	21.86
42.5	2.61	3.39	4.19	4.99	5.81	6.65	7.49	8.35	9.21	10.09	10.98	11.88	12.78	13.70	14.62	15.56	16.50	17.44	18.39	19.35	20.32	21.28	22.26
43.5	2.66	3.47	4.29	5.12	5.97	6.82	7.69	8.57	9.45	10.35	11.25	12.17	13.09	14.02	14.95	15.90	16.85	17.80	18.76	19.73	20.70	21.67	22.65
44.5	2.71	3.55	4.40	5.26	6.13	7.00	7.89	8.79	9.69	10.60	11.53	12.45	13.39	14.33	15.28	16.23	17.19	18.15	19.12	20.10	21.07	22.05	23.04
45.5	2.76	3.63	4.50	5.39	6.28	7.18	8.09	9.01	9.93	10.86	11.80	12.74	13.69	14.64	15.60	16.56	17.53	18.50	19.48	20.46	21.44	22.42	23.41
46.5	2.81	3.71	4.61	5.52	6.44	7.36	8.29	9.23	10.17	11.12	12.07	13.02	13.98	14.95	15.92	16.89	17.87	18.85	19.83	20.81	21.80	22.79	23.78
47.5	2.86	3.79	4.72	5.66	6.60	7.54	8.49	9.45	10.41	11.37	12.34	13.31	14.28	15.25	16.23	17.21	18.20	19.18	20.17	21.16	22.15	23.14	24.14
48.5	2.92	3.87	4.83	5.79	6.76	7.73	8.70	9.67	10.64	11.62	12.60	13.58	14.57	15.55	16.54	17.53	18.52	19.51	20.51	21.50	22.50	23.49	24.49
49.5	2.97	3.96	4.94	5.93	6.92	7.91	8.90	9.89	10.88	11.87	12.87	13.86	14.86	15.85	16.85	17.84	18.84	19.84	20.84	21.84	22.83	23.83	24.83
50.5	3.03	4.04	5.06	6.07	7.08	8.09	9.10	10.11	11.12	12.13	13.13	14.14	15.14	16.15	17.15	18.15	19.16	20.16	21.16	22.16	23.16	24.17	25.17
51.5	3.08	4.13	5.17	6.21	7.24	8.28	9.30	10.33	11.35	12.37	13.39	14.41	15.42	16.44	17.45	18.46	19.47	20.47	21.48	22.48	23.49	24.49	25.49
52.5	3.14	4.22	5.28	6.35	7.41	8.46	9.51	10.55	11.59	12.62	13.65	14.68	15.70	16.72	17.74	18.76	19.77	20.78	21.79	22.80	23.80	24.81	25.81
53.5	3.20	4.30	5.40	6.49	7.57	8.64	9.71	10.77	11.82	12.87	13.91	14.95	15.98	17.01	18.03	19.05	20.07	21.09	22.10	23.11	24.11	25.12	26.12
54.5	3.26	4.39	5.52	6.63	7.73	8.83	9.91	10.99	12.05	13.11	14.17	15.21	16.25	17.29	18.32	19.34	20.36	21.38	22.40	23.41	24.42	25.42	26.43
55.5	3.31	4.48	5.63	6.77	7.90	9.01	10.11	11.20	12.29	13.36	14.42	15.48	16.52	17.56	18.60	19.63	20.65	21.67	22.69	23.70	24.71	25.72	26.73
56.5	3.37	4.57	5.75	6.92	8.06	9.20	10.32	11.42	12.52	13.60	14.67	15.73	16.79	17.84	18.88	19.91	20.94	21.96	22.98	23.99	25.00	26.01	27.02
57.5	3.43	4.66	5.87	7.06	8.23	9.38	10.52	11.64	12.75	13.84	14.92	15.99	17.05	18.11	19.15	20.19	21.22	22.24	23.26	24.28	25.29	26.29	27.30
58.5	3.50	4.75	5.99	7.20	8.39	9.57	10.72	11.85	12.97	14.08	15.17	16.25	17.31	18.37	19.42	20.46	21.49	22.52	23.54	24.55	25.56	26.57	27.57
59.5	3.56	4.85	6.11	7.35	8.56	9.75	10.92	12.07	13.20	14.31	15.41	16.50	17.57	18.63	19.68	20.73	21.76	22.79	23.81	24.83	25.84	26.84	27.84
60.5	3.62	4.94	6.23	7.49	8.73	9.94	11.12	12.28	13.42	14.55	15.65	16.75	17.82	18.89	19.94	20.99	22.02	23.05	24.08	25.09	26.10	27.11	28.11
61.5	3.68	5.03	6.35	7.64	8.89	10.12	11.32	12.49	13.65	14.78	15.89	16.99	18.07	19.14	20.20	21.25	22.28	23.31	24.34	25.35	26.36	27.36	28.36
62.5	3.75	5.13	6.48	7.78	9.06	10.30	11.52	12.71	13.87	15.01	16.13	17.23	18.32	19.39	20.45	21.50	22.54	23.57	24.59	25.60	26.61	27.62	28.61
63.5	3.81	5.22	6.60	7.93	9.23	10.49	11.72	12.92	14.09	15.24	16.36	17.47	18.56	19.64	20.70	21.75	22.79	23.82	24.84	25.85	26.86	27.86	28.86
64.5	3.87	5.32	6.72	8.08	9.39	10.67	11.91	13.12	14.31	15.46	16.60	17.71	18.80	19.88	20.94	21.99	23.03	24.06	25.08	26.10	27.10	28.10	29.10
65.5	3.94	5.42	6.85	8.22	9.56	10.85	12.11	13.33	14.52	15.69	16.83	17.94	19.04	20.12	21.18	22.24	23.27	24.30	25.32	26.33	27.34	28.34	29.33
66.5	4.00	5.51	6.97	8.37	9.73	11.04	12.31	13.54	14.74	15.91	17.05	18.17	19.27	20.35	21.42	22.47	23.51	24.54	25.56	26.57	27.57	28.57	29.56
67.5	4.07	5.61	7.09	8.52	9.89	11.22	12.50	13.74	14.95	16.13	17.28	18.40	19.50	20.59	21.65	22.70	23.74	24.77	25.79	26.80	27.80	28.79	29.78
68.5	4.14	5.71	7.22	8.67	10.06	11.40	12.69	13.95	15.16	16.34	17.50	18.62	19.73	20.81	21.88	22.93	23.97	25.00	26.01	27.02	28.02	29.01	30.00
69.5	4.20	5.81	7.35	8.82	10.23	11.58	12.89	14.15	15.37	16.56	17.72	18.85	19.95	21.04	22.10	23.16	24.19	25.22	26.23	27.24	28.23	29.22	30.21
70.5	4.27	5.91	7.47	8.96	10.39	11.76	13.08	14.35	15.58	16.77	17.93	19.06	20.17	21.26	22.32	23.38	24.41	25.43	26.45	27.45	28.44	29.43	30.41
71.5	4.34	6.01	7.60	9.11	10.56	11.94	13.27	14.55	15.78	16.98	18.15	19.28	20.39	21.47	22.54	23.59	24.63	25.65	26.66	27.66	28.65	29.64	30.61
72.5	4.41	6.11	7.73	9.26	10.72	12.12	13.46	14.75	15.99	17.19	18.36	19.49	20.60	21.69	22.75	23.80	24.84	25.86	26.86	27.86	28.85	29.83	30.81
73.5	4.48	6.21	7.85	9.41	10.89	12.30	13.65	14.94	16.19	17.40	18.56	19.70	20.81	21.90	22.96	24.01	25.04	26.06	27.07	28.06	29.05	30.03	31.00
74.5	4.55	6.31	7.98	9.56	11.05	12.47	13.83	15.14	16.39	17.60	18.77	19.91	21.02	22.10	23.17	24.21	25.24	26.26	27.26	28.26	29.24	30.22	31.19
75.5	4.62	6.42	8.11	9.70	11.22	12.65	14.02	15.33	16.59	17.80	18.97	20.11	21.22	22.31	23.37	24.41	25.44	26.46	27.46	28.45	29.43	30.40	31.37
76.5	4.69	6.52	8.24	9.85	11.38	12.83	14.20	15.52	16.78	18.00	19.17	20.31	21.42	22.51	23.57	24.61	25.64	26.65	27.65	28.63	29.61	30.59	31.55
77.5	4.76	6.62	8.36	10.00	11.54	13.00	14.39	15.71	16.98	18.19	19.37	20.51	21.62	22.70	23.76	24.80	25.83	26.84	27.83	28.82	29.79	30.76	31.73
78.5	4.83	6.72	8.49	10.15	11.70	13.17	14.57	15.90	17.17	18.39	19.57	20.71	21.82	22.90	23.96	24.99	26.01	27.02	28.01	29.00	29.97	30.94	31.90
79.5	4.91	6.83	8.62	10.29	11.87	13.35	14.75	16.08	17.36	18.58	19.76	20.90	22.01	23.09	24.14	25.18	26.20	27.20	28.19	29.17	30.14	31.11	32.06
80.5	4.98	6.93	8.75	10.44	12.03	13.52	14.93	16.27	17.55	18.77	19.95	21.09	22.20	23.27	24.33	25.36	26.38	27.38	28.37	29.34	30.31	31.27	32.23
81.5	5.05	7.04	8.88	10.59	12.19	13.69	15.11	16.45	17.73	18.96	20.14	21.28	22.38	23.46	24.51	25.54	26.55	27.55	28.54	29.51	30.48	31.43	32.38
82.5	5.13	7.14	9.01	10.74	12.35	13.86	15.28	16.63	17.91	19.14	20.32	21.46	22.56	23.64	24.69	25.72	26.73	27.72	28.70	29.67	30.64	31.59	32.54
83.5	5.20	7.25	9.13	10.88	12.51	14.03	15.46	16.81	18.10	19.32	20.50	21.64	22.74	23.82	24.86	25.89	26.90	27.89	28.87	29.84	30.79	31.75	32.69
84.5	5.27	7.35	9.26	11.03	12.67	14.20	15.63	16.99	18.28	19.50	20.68	21.82	22.92	23.99	25.04	26.06	27.06	28.05	29.03	29.99	30.95	31.90	32.84
85.5	5.35	7.46	9.39	11.17	12.83	14.36	15.81	17.17	18.45	19.68	20.86	22.00	23.09	24.16	25.20	26.22	27.23	28.21	29.18	30.15	31.10	32.04	32.98
86.5	5.42	7.56	9.52	11.32	12.98	14.53	15.98	17.34	18.63	19.86	21.04	22.17	23.27	24.33	25.37	26.39	27.39	28.37	29.34	30.30	31.25	32.19	33.13
87.5	5.50	7.67	9.65	11.47	13.14	14.70	16.15	17.51	18.80	20.03	21.21	22.34	23.43	24.50	25.53	26.55	27.54	28.52	29.49	30.44	31.39	32.33	33.26
88.5	5.58	7.78	9.78	11.61	13.30	14.86	16.32	17.68	18.98	20.20	21.38	22.51	23.60	24.66	25.69	26.70	27.70	28.67	29.64	30.59	31.53	32.47	33.40
89.5	5.65	7.88	9.91	11.75	13.45	15.02	16.48	17.85	19.14	20.37	21.55	22.67	23.76	24.82	25.85	26.86	27.85	28.82	29.78	30.73	31.67	32.60	33.53

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A4. Provincial white spruce height and site index prediction table (continued).

Bhage* (years)	Site index (m) at 50 years Bhage																							
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Height (m)																						
90.5	5.73	7.99	10.04	11.90	13.61	15.18	16.65	18.02	19.31	20.54	21.71	22.84	23.92	24.98	26.01	27.01	28.00	28.97	29.92	30.87	31.81	32.74	33.66
91.5	5.81	8.10	10.16	12.04	13.76	15.34	16.81	18.19	19.48	20.70	21.87	23.00	24.08	25.13	26.16	27.16	28.14	29.11	30.06	31.00	31.94	32.86	33.79
92.5	5.88	8.20	10.29	12.19	13.91	15.50	16.97	18.35	19.64	20.87	22.04	23.16	24.24	25.29	26.31	27.30	28.28	29.25	30.20	31.14	32.07	32.99	33.91
93.5	5.96	8.31	10.42	12.33	14.07	15.66	17.14	18.51	19.80	21.03	22.19	23.31	24.39	25.44	26.45	27.45	28.42	29.38	30.33	31.27	32.19	33.12	34.03
94.5	6.04	8.42	10.55	12.47	14.22	15.82	17.29	18.67	19.96	21.19	22.35	23.47	24.54	25.58	26.60	27.59	28.56	29.52	30.46	31.39	32.32	33.24	34.15
95.5	6.12	8.53	10.68	12.61	14.37	15.97	17.45	18.83	20.12	21.34	22.50	23.62	24.69	25.73	26.74	27.73	28.69	29.65	30.59	31.52	32.44	33.35	34.26
96.5	6.20	8.63	10.80	12.75	14.52	16.13	17.61	18.99	20.28	21.50	22.66	23.77	24.83	25.87	26.88	27.86	28.83	29.78	30.71	31.64	32.56	33.47	34.38
97.5	6.27	8.74	10.93	12.89	14.66	16.28	17.76	19.14	20.43	21.65	22.81	23.91	24.98	26.01	27.01	27.99	28.96	29.90	30.84	31.76	32.68	33.58	34.49
98.5	6.35	8.85	11.06	13.03	14.81	16.43	17.92	19.30	20.59	21.80	22.95	24.06	25.12	26.15	27.15	28.12	29.08	30.03	30.96	31.88	32.79	33.70	34.60
99.5	6.43	8.96	11.18	13.17	14.96	16.58	18.07	19.45	20.74	21.95	23.10	24.20	25.26	26.28	27.28	28.25	29.21	30.15	31.07	31.99	32.90	33.80	34.70
100.5	6.51	9.06	11.31	13.31	15.10	16.73	18.22	19.60	20.88	22.09	23.24	24.34	25.39	26.41	27.41	28.38	29.33	30.27	31.19	32.10	33.01	33.91	34.81
101.5	6.59	9.17	11.44	13.45	15.25	16.88	18.37	19.75	21.03	22.24	23.38	24.48	25.53	26.55	27.53	28.50	29.45	30.38	31.30	32.21	33.12	34.02	34.91
102.5	6.67	9.28	11.56	13.59	15.39	17.03	18.52	19.89	21.18	22.38	23.52	24.61	25.66	26.67	27.66	28.62	29.57	30.50	31.41	32.32	33.22	34.12	35.01
103.5	6.75	9.39	11.69	13.72	15.54	17.17	18.67	20.04	21.32	22.52	23.66	24.75	25.79	26.80	27.78	28.74	29.68	30.61	31.52	32.43	33.33	34.22	35.10
104.5	6.83	9.49	11.81	13.86	15.68	17.32	18.81	20.18	21.46	22.66	23.79	24.88	25.92	26.92	27.90	28.86	29.80	30.72	31.63	32.53	33.43	34.32	35.20
105.5	6.92	9.60	11.94	13.99	15.82	17.46	18.95	20.33	21.60	22.80	23.93	25.01	26.04	27.05	28.02	28.97	29.91	30.83	31.74	32.63	33.53	34.41	35.29
106.5	7.00	9.71	12.06	14.13	15.96	17.60	19.10	20.47	21.74	22.93	24.06	25.13	26.17	27.17	28.14	29.09	30.02	30.93	31.84	32.73	33.62	34.51	35.39
107.5	7.08	9.82	12.19	14.26	16.10	17.74	19.24	20.61	21.88	23.06	24.19	25.26	26.29	27.28	28.25	29.20	30.12	31.04	31.94	32.83	33.72	34.60	35.47
108.5	7.16	9.93	12.31	14.40	16.24	17.88	19.38	20.74	22.01	23.20	24.32	25.38	26.41	27.40	28.36	29.31	30.23	31.14	32.04	32.93	33.81	34.69	35.56
109.5	7.24	10.03	12.44	14.53	16.37	18.02	19.51	20.88	22.14	23.32	24.44	25.51	26.53	27.51	28.47	29.41	30.33	31.24	32.13	33.02	33.90	34.78	35.65
110.5	7.32	10.14	12.56	14.66	16.51	18.16	19.65	21.01	22.27	23.45	24.57	25.63	26.64	27.63	28.58	29.52	30.43	31.34	32.23	33.11	33.99	34.86	35.73
111.5	7.40	10.25	12.68	14.79	16.65	18.30	19.79	21.15	22.40	23.58	24.69	25.74	26.76	27.74	28.69	29.62	30.53	31.43	32.32	33.20	34.08	34.95	35.82
112.5	7.49	10.36	12.81	14.92	16.78	18.43	19.92	21.28	22.53	23.70	24.81	25.86	26.87	27.85	28.80	29.72	30.63	31.53	32.41	33.29	34.16	35.03	35.90
113.5	7.57	10.46	12.93	15.05	16.91	18.57	20.05	21.41	22.66	23.83	24.93	25.98	26.98	27.95	28.90	29.82	30.73	31.62	32.50	33.38	34.25	35.11	35.98
114.5	7.65	10.57	13.05	15.18	17.05	18.70	20.18	21.53	22.78	23.95	25.04	26.09	27.09	28.06	29.00	29.92	30.82	31.71	32.59	33.47	34.33	35.19	36.05
115.5	7.73	10.68	13.17	15.31	17.18	18.83	20.31	21.66	22.91	24.07	25.16	26.20	27.20	28.16	29.10	30.02	30.92	31.80	32.68	33.55	34.41	35.27	36.13
116.5	7.82	10.78	13.29	15.44	17.31	18.96	20.44	21.79	23.03	24.18	25.27	26.31	27.30	28.26	29.20	30.11	31.01	31.89	32.76	33.63	34.49	35.35	36.20
117.5	7.90	10.89	13.41	15.57	17.44	19.09	20.57	21.91	23.15	24.30	25.38	26.42	27.41	28.36	29.29	30.20	31.10	31.98	32.85	33.71	34.57	35.43	36.28
118.5	7.98	11.00	13.53	15.69	17.57	19.22	20.69	22.03	23.27	24.41	25.49	26.52	27.51	28.46	29.39	30.29	31.18	32.06	32.93	33.79	34.65	35.50	36.35
119.5	8.07	11.10	13.65	15.82	17.69	19.34	20.82	22.15	23.38	24.53	25.60	26.63	27.61	28.56	29.48	30.38	31.27	32.15	33.01	33.87	34.72	35.57	36.42
120.5	8.15	11.21	13.77	15.94	17.82	19.47	20.94	22.27	23.50	24.64	25.71	26.73	27.71	28.65	29.57	30.47	31.36	32.23	33.09	33.95	34.80	35.64	36.49
121.5	8.23	11.32	13.89	16.07	17.94	19.59	21.06	22.39	23.61	24.75	25.82	26.83	27.81	28.75	29.66	30.56	31.44	32.31	33.17	34.02	34.87	35.71	36.56
122.5	8.31	11.42	14.00	16.19	18.07	19.71	21.18	22.51	23.72	24.86	25.92	26.93	27.90	28.84	29.75	30.64	31.52	32.39	33.24	34.09	34.94	35.78	36.62
123.5	8.40	11.53	14.12	16.31	18.19	19.84	21.30	22.62	23.84	24.96	26.02	27.03	28.00	28.93	29.84	30.73	31.60	32.46	33.32	34.17	35.01	35.85	36.69
124.5	8.48	11.63	14.24	16.43	18.31	19.96	21.42	22.74	23.95	25.07	26.12	27.13	28.09	29.02	29.92	30.81	31.68	32.54	33.39	34.24	35.08	35.92	36.75
125.5	8.57	11.74	14.36	16.55	18.44	20.08	21.53	22.85	24.05	25.17	26.22	27.22	28.18	29.11	30.01	30.89	31.76	32.62	33.46	34.31	35.14	35.98	36.82
126.5	8.65	11.84	14.47	16.67	18.56	20.20	21.65	22.96	24.16	25.27	26.32	27.32	28.27	29.19	30.09	30.97	31.84	32.69	33.53	34.37	35.21	36.04	36.88
127.5	8.73	11.95	14.59	16.79	18.68	20.31	21.76	23.07	24.27	25.38	26.42	27.41	28.36	29.28	30.17	31.05	31.91	32.76	33.60	34.44	35.28	36.11	36.94
128.5	8.82	12.05	14.70	16.91	18.79	20.43	21.88	23.18	24.37	25.48	26.51	27.50	28.45	29.36	30.25	31.13	31.98	32.83	33.67	34.51	35.34	36.17	37.00
129.5	8.90	12.16	14.82	17.03	18.91	20.54	21.99	23.29	24.47	25.57	26.61	27.59	28.53	29.45	30.33	31.20	32.06	32.90	33.74	34.57	35.40	36.23	37.05
130.5	8.98	12.26	14.93	17.15	19.03	20.66	22.10	23.39	24.57	25.67	26.70	27.68	28.62	29.53	30.41	31.28	32.13	32.97	33.81	34.64	35.46	36.29	37.11
131.5	9.07	12.37	15.04	17.26	19.14	20.77	22.21	23.50	24.68	25.77	26.79	27.77	28.70	29.61	30.49	31.35	32.20	33.04	33.87	34.70	35.52	36.35	37.17
132.5	9.15	12.47	15.15	17.38	19.26	20.88	22.31	23.60	24.77	25.86	26.88	27.85	28.78	29.68	30.56	31.42	32.27	33.11	33.93	34.76	35.58	36.40	37.22
133.5	9.24	12.57	15.27	17.49	19.37	20.99	22.42	23.70	24.87	25.96	26.97	27.94	28.87	29.76	30.64	31.49	32.34	33.17	34.00	34.82	35.64	36.46	37.28
134.5	9.32	12.68	15.38	17.60	19.48	21.10	22.53	23.80	24.97	26.05	27.06	28.02	28.95	29.84	30.71	31.56	32.40	33.23	34.06	34.88	35.70	36.51	37.33
135.5	9.40	12.78	15.49	17.72	19.59	21.21	22.63	23.90	25.06	26.14	27.15	28.10	29.02	29.91	30.78	31.63	32.47	33.30	34.12	34.94	35.75	36.57	37.38
136.5	9.49	12.88	15.60	17.83	19.71	21.32	22.73	24.00	25.16	26.23	27.23	28.19	29.10	29.99	30.85	31.70	32.53	33.36	34.18	35.00	35.81	36.62	37.43
137.5	9.57	12.98	15.71	17.94	19.82	21.42	22.84	24.10	25.25	26.32	27.32	28.27	29.18	30.06	30.92	31.77	32.60	33.42	34.24	35.05	35.86	36.67	37.49
138.5	9.66	13.09	15.82	18.05	19.92	21.53	22.94	24.20	25.34	26.40	27.40	28.34	29.25	30.13	30.99	31.83	32.66	33.48	34.30	35.11	35.92	36.73	37.53
139.5	9.74	13.19	15.93	18.16	20.03	21.63	23.04	24.29	25.43	26.49	27.48	28.42	29.33	30.20	31.06	31.89	32.72	33.54	34.35	35.16	35.97	36.78	37.58
140.5	9.82	13.29	16.03	18.27	20.14	21.74	23.14	24.39	25.52	26.57	27.56	28.50	29.40	30.27	31.12	31.96	32.78	33.60	34.41	35.22	36.02	36.83	37.63
141.5	9.91	13.39	16.14	18.38	20.24	21.84	23.23	24.48	25.61	26.66	27.64	28.57	29.47	30.34	31.19	32.02	32.84	33.65	34.46	35.27	36.07	36.87	37.68
142.5	9.99	13.49	16.25	18.49	20.35	21.94	23.33	24.57	25.70	26.74	27.72	28.65	29.54	30.41	31.25	32.08	32.90	33.71	34.52	35.32	36.12	36.92	37.72
143.5	10.07	13.59	16.35	18.59	20.45	22.04	23.43	24.66	25.78	26.82	27.80	28.72	29.61	30.47	31.32	32.14	32.96	33.77	34.57	35.37	36.17	36.97	37.77
144.5	10.16	13.69	16.46	18.70	20.56	22.14	23.52	24.75	25.87	26.90	27.87	28.80	29.68	30.54	31.38	32.20	33.01	33.82	34.62	35.42	36.22	37.02	37.81
145.5	10.24	13.79	16.57	18.80	20.66	22.24	23.61	24.84	25.95	26.98	27.95	28.87	29.75	30.60	31.44	32.26	33.07	33.87	34.67	35.47	36.27	37.06	37.86
146.5	10.33	13.89	16.67	18.91	20.76	22.34	23.71	24.93	26.04	27.06	28.02	28.94	29.82	30.67	31.50	32.32	33.13	33.93	34.72	35.52	36.31	37.11	37.90
147.5	10.41	13.99	16.77	19.01	20.86	22.43	23.80	25.01	26.12	27.14	28.10	29.01	29.88	30.73	31.56	32.37	33.18	33.98	34.77	35.57	36.36	37.15	37.94
148.5	10.49	14.09	16.88	19.11	20.96	22.53	23.89	25.10	26.20	27.22	28.17	29.07	29.95	30.79	31.62	32.43	33.23	34.03	34.82	35.61	36.40	37.19	37.99
149.5	10.58	14.18	16.98	19.22	21.06	22.62	23.98	25.18	26.28	27.29	28.24	29.14	30.01	30.85	31.68	32.49	33.29	34.08	34.87	35.66	36.45	37.24	38.03
150.5	10.66	14.28	17.08	19.32	21.16	22.72	24.07	25.27	26.36	27.37	28.31	29.21	30.07	30.91	31.73	32.54	33.34	34.13	34.92	35.70	36.49	37.28	38.07
151.5	10.74	14.38	17.18	19.42	21.25	22.81	24.15	25.35	26.44	27.44	28.38	29.27	30.14	30.97	31.79	32.59	33.39	34.18	34.96	35.75	36.53	37.32	38.11
152.5	10.83	14.48	17.28	19.52	21.35	22.90	24.24	25.43	26.51	27.51	28.45	29.34	30.20	31.03	31.84	32.65	33.44	34.23	35.01	35.79	36.58	37.36	38.15
153.5	10.91	14.57	17.39	19.62	21.45	22.99	24.33	25.51	26.59	27.58	28.52	29.40	30.26	31.09	31.90	32.70	33.49	34.27	35.05	35.84	36.62	37.40	38.19
154.5	10.99	14.67	17.48	19.72	21.54	23.08	24.41	25.59	26.66	27.65	28.58	29.47	30.32	31.14	31.95	32.75	33.54	34.32	35.10	35.88	36.66	37.44	38.22
155.5	11.08	14.77	17.58	19.81	21.63	23.17	24.50	25.67	26.74	27.72	28.65	29.53	30.38	31.20	32.00	32.80	33.58	34.36	35.14	35.92	36.70	37.48	38.26
156.5	11.16	14.86	17.68	19.91	21.73	23.26	24.58	25.75	26.81	27.79	28.71	29.59	30.43	31.25	32.06	32.85	33.63	34.41	35.19	35.96	36.74	37.52	38.30
157.5	11.24	14.96	17.78	20.01	21.82	23.34	24.66	25.83	26.88	27.86	28.78	29.65	30.49	31.31	32.11	32.90	33.68	34.45	35.23	36.00	36.78	37.55	38.33
158.5	11.32	15.05	17.88	20.10	21.91	23.43	24.74	25.90	26.96	27.93	28.84	29.71	30.55	31.36	32.16	32.94	33.72	34.50	35.27	36.04	36.82	37.59	38.37
159.5	11.41	15.15	17.97	20.20	22.00	23.51	24.82	25.98	27.03	27.99	28.90	29.77	30.60	31.41	32.21	32.99	33.77	34.54	35.31	36.08	36.85	37.63	38.40
160.5	11.49	15.24	18.07	20.29	22.09	23.60	24.90	26.05	27.10	28.06	28.96	29.83	30.66	31.46	32.26	33.04	33.81	34.58	35.35	36.12	36.89	37.66	38.44
161.5	11.57	15.34	18.17	20.38	22.18	23.68	24.98	26.13	27.16	28.12	29.02	29.88	30.71	31.52	32.31	33.08	33.86	34.62	35.39	36.16	36.93	37.70	38.47
162.5	11.65	15.43	18.26	20.47	22.27	23.77	25.06	26.20	27.23	28.19	29.08	29.94	30.76	31.57	32.35	33.13	33.90	34.67	35.43	36.20	36.96	37.73	38.50
163.5	11.73	15.52	18.36	20.57	22.35	23.85	25.13	26.27	27.30	28.25	29.14	29.99	30.82	31.62	32.40	33.17	33.94	34.71	35.47	36.23	37.00	37.77	38.54
164.5	11.82	15.61	18.45	20.66	22.44	23.93	25.21	26.34	27.37	28.31	29.20	30.05	30.87	31.66	32.45	33.22	33.98	34.75	35.51	36.27	37.03	37.80	38.57
165.5	11.90	15.71	18.54	20.75	22.53	24.01	25.28	26.41	27.43	28.37	29.26	30.10	30.92	31.71	32.49	33.26	34.03	34.79	35.55	36.31	37.07	37.83	38.60
166.5	11.98	15.80	18.64	20.84	22.61	24.09	25.36	26.48	27.50	28.43	29.32	30.16	30.97	31.76	32.54	33.30	34.07	34.82	35.58	36.34	37.10	37.87	38.63
167.5	12.06	15.89	18.73	20.93	22.69	24.17	25.43	26.55	27.56	28.49	29.37	30.21	31.02	31.81	32.58	33.35	34.11	34.86	35.62	36.38	37.13	37.90	38.66
168.5	12.14	15.98	18.82	21.01	22.78	24.25	25.51	26.62	27.62	28.55	29.43	30.26	31.07	31.85	32.62	33.39	34.15	34.90	35.65	36.41	37.17	37.93	38.69
169.5	12.22	16.07	18.91	21.10	22.86	24.32	25.58	26.68	27.69	28.61	29.48	30.31	31.12	31.90	32.67	33.43	34.18	34.94	35.69	36.44	37.20	37.96	38.72
170.5	12.31	16.16	19.00	21.19	22.94	24.40	25.65	26.75	27.75	28.67	29.54	30.36	31.16	31.94	32.71	33.47	34.22	34.97	35.72	36.48	37.23	37.99	38.75
171.5	12.39	16.25	19.09	21.27	23.02	24.47	25.72	26.82	27.81	28.73	29.59	30.41	31.21	31.99	32.75	33.51	34.26	35.01	35.76	36.51	37.26	38.02	38.78
172.5	12.47	16.34	19.18	21.36	23.10	24.55	25.79	26.88	27.87	28.78	29.64	30.46	31.26	32.03	32.79	33.55	34.30	35.05	35.79	36.54	37.29	38.05	38.81
173.5	12.55	16.43	19.27	21.44	23.18	24.62	25.86	26.94	27.93	28.84	29.69	30.51	31.30	32.08	32.83	33.59	34.33	35.08	35.83	36.57	37.33	38.08	38.84
174.5	12.63	16.52	19.36	21.53	23.26	24.70	25.93	27.01	27.99	28.89	29.75	30.56	31.35	32.12	32.88	33.62	34.37	35.11	35.86	36.61	37.36	38.11	38.87
175.5	12.71	16.61	19.44	21.61	23.34	24.77	25.99	27.07	28.05	28.95	29.80	30.61	31.39	32.16	32.91	33.66	34.41	35.15	35.89	36.64	37.38	38.14	38.89
176.5	12.79	16.69	19.53	21.69	23.42	24.84	26.06	27.13	28.10	29.00	29.85	30.65	31.44	32.20	32.95	33.70	34.44	35.18	35.92	36.67	37.41	38.17	38.92
177.5	12.87	16.78	19.62	21.78	23.49	24.91	26.13	27.19	28.16	29.05	29.90	30.70	31.48	32.24	32.99	33.74	34.48	35.22	35.95	36.70	37.44	38.19	38.95
178.5	12.95	16.87	19.70	21.86	23.57	24.98	26.19	27.25	28.22	29.11	29.94	30.75	31.52	32.28	33.03	33.77	34.51	35.25	35.99	36.73	37.47	38.22	38.97
179.5	13.03	16.95	19.79	21.94	23.65	25.05	26.26	27.31	28.27	29.16	29.99	30.79	31.57	32.32	33.07	33.81	34.54	35.28	36.02	36.76	37.50	38.25	39.00

*Bhage = (ring count at 1.3 m above ground - 0.5).

Table A5. White spruce site index prediction table at young ages in subregions 1 to 6 and 12 to 16.

Height (m)	Ring count at 1.3 m above ground																									
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
1.5	7.0	6.1	5.4	4.8	4.4	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8
1.6	9.2	8.0	7.1	6.4	5.7	5.2	4.8	4.4	4.1	3.8	3.6	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1
1.7	11.1	9.7	8.6	7.7	7.0	6.3	5.8	5.3	5.0	4.6	4.3	4.1	3.8	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3
1.8	12.8	11.3	10.0	9.0	8.1	7.4	6.8	6.2	5.8	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.0	2.9	2.8	2.8	2.7	2.6
1.9	14.3	12.7	11.3	10.2	9.2	8.4	7.7	7.0	6.5	6.1	5.6	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.9
2.0	15.7	14.0	12.5	11.2	10.2	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1
2.1	17.0	15.1	13.6	12.3	11.1	10.2	9.3	8.6	7.9	7.4	6.9	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4
2.2	18.2	16.2	14.6	13.2	12.0	11.0	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.3	4.2	4.0	3.9	3.7	3.6
2.3	19.3	17.3	15.6	14.1	12.9	11.8	10.8	10.0	9.3	8.6	8.0	7.5	7.1	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8
2.4	20.4	18.3	16.5	15.0	13.6	12.5	11.5	10.6	9.9	9.2	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1
2.5	21.3	19.2	17.3	15.8	14.4	13.2	12.2	11.3	10.5	9.7	9.1	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.8	4.7	4.5	4.3
2.6	22.3	20.1	18.2	16.5	15.1	13.9	12.8	11.9	11.0	10.3	9.6	9.0	8.5	8.0	7.5	7.1	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.6
2.7	23.2	20.9	19.0	17.3	15.8	14.6	13.5	12.5	11.6	10.8	10.1	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8
2.8	24.0	21.7	19.7	18.0	16.5	15.2	14.1	13.0	12.1	11.3	10.6	9.9	9.3	8.8	8.3	7.9	7.5	7.1	6.8	6.4	6.2	5.9	5.7	5.4	5.2	5.0
2.9	24.9	22.5	20.4	18.7	17.2	15.8	14.6	13.6	12.7	11.8	11.1	10.4	9.8	9.2	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3
3.0	25.7	23.2	21.1	19.3	17.8	16.4	15.2	14.1	13.2	12.3	11.5	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.4	7.0	6.7	6.4	6.2	5.9	5.7	5.5
3.1	26.4	23.9	21.8	20.0	18.4	17.0	15.7	14.6	13.6	12.8	12.0	11.2	10.6	10.0	9.4	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7
3.2	27.2	24.6	22.5	20.6	19.0	17.5	16.3	15.1	14.1	13.2	12.4	11.7	11.0	10.4	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9
3.3	27.9	25.3	23.1	21.2	19.5	18.1	16.8	15.6	14.6	13.7	12.8	12.1	11.4	10.7	10.2	9.6	9.2	8.7	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.1
3.4	28.6	25.9	23.7	21.8	20.1	18.6	17.3	16.1	15.0	14.1	13.2	12.5	11.8	11.1	10.5	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4
3.5	29.2	26.6	24.3	22.3	20.6	19.1	17.8	16.6	15.5	14.5	13.6	12.8	12.1	11.5	10.9	10.3	9.8	9.3	8.9	8.5	8.1	7.7	7.4	7.1	6.8	6.6
3.6	29.9	27.2	24.9	22.9	21.1	19.6	18.2	17.0	15.9	14.9	14.0	13.2	12.5	11.8	11.2	10.6	10.1	9.6	9.2	8.7	8.4	8.0	7.7	7.4	7.1	6.8
3.7	30.5	27.8	25.4	23.4	21.6	20.1	18.7	17.5	16.3	15.3	14.4	13.6	12.8	12.2	11.5	10.9	10.4	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3	7.0
3.8	31.1	28.3	26.0	23.9	22.1	20.6	19.1	17.9	16.8	15.7	14.8	14.0	13.2	12.5	11.8	11.2	10.7	10.2	9.7	9.3	8.9	8.5	8.1	7.8	7.5	7.2
3.9	31.7	28.9	26.5	24.4	22.6	21.0	19.6	18.3	17.2	16.1	15.2	14.3	13.5	12.8	12.2	11.5	11.0	10.5	10.0	9.5	9.1	8.7	8.4	8.0	7.7	7.4
4.0	32.3	29.5	27.0	24.9	23.1	21.5	20.0	18.7	17.6	16.5	15.5	14.7	13.9	13.1	12.5	11.9	11.3	10.7	10.3	9.8	9.4	9.0	8.6	8.3	7.9	7.6
4.1	32.9	30.0	27.5	25.4	23.6	21.9	20.4	19.1	18.0	16.9	15.9	15.0	14.2	13.5	12.8	12.1	11.6	11.0	10.5	10.1	9.6	9.2	8.8	8.5	8.2	7.8
4.2	33.4	30.5	28.0	25.9	24.0	22.3	20.9	19.5	18.3	17.2	16.3	15.4	14.5	13.8	13.1	12.4	11.8	11.3	10.8	10.3	9.9	9.5	9.1	8.7	8.4	8.1
4.3	34.0	31.0	28.5	26.4	24.4	22.8	21.3	19.9	18.7	17.6	16.6	15.7	14.9	14.1	13.4	12.7	12.1	11.6	11.0	10.6	10.1	9.7	9.3	8.9	8.6	8.3
4.4	34.5	31.6	29.0	26.8	24.9	23.2	21.7	20.3	19.1	18.0	16.9	16.0	15.2	14.4	13.7	13.0	12.4	11.8	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5
4.5	35.1	32.0	29.5	27.3	25.3	23.6	22.1	20.7	19.4	18.3	17.3	16.3	15.5	14.7	14.0	13.3	12.7	12.1	11.6	11.0	10.6	10.1	9.7	9.4	9.0	8.7
4.6	35.6	32.5	29.9	27.7	25.7	24.0	22.4	21.0	19.8	18.7	17.6	16.7	15.8	15.0	14.3	13.6	12.9	12.3	11.8	11.3	10.8	10.4	10.0	9.6	9.2	8.9
4.7	36.1	33.0	30.4	28.1	26.1	24.4	22.8	21.4	20.1	19.0	17.9	17.0	16.1	15.3	14.5	13.8	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.4	9.1
4.8	36.6	33.5	30.8	28.5	26.5	24.8	23.2	21.8	20.5	19.3	18.3	17.3	16.4	15.6	14.8	14.1	13.5	12.9	12.3	11.8	11.3	10.8	10.4	10.0	9.6	9.2
4.9	37.1	33.9	31.3	29.0	26.9	25.1	23.5	22.1	20.8	19.6	18.6	17.6	16.7	15.9	15.1	14.4	13.7	13.1	12.5	12.0	11.5	11.0	10.6	10.2	9.8	9.4
5.0	37.5	34.4	31.7	29.4	27.3	25.5	23.9	22.5	21.2	20.0	18.9	17.9	17.0	16.1	15.4	14.6	14.0	13.4	12.8	12.2	11.7	11.3	10.8	10.4	10.0	9.6
5.1	38.0	34.8	32.1	29.8	27.7	25.9	24.3	22.8	21.5	20.3	19.2	18.2	17.3	16.4	15.6	14.9	14.2	13.6	13.0	12.5	11.9	11.5	11.0	10.6	10.2	9.8
5.2	38.5	35.3	32.5	30.2	28.1	26.2	24.6	23.1	21.8	20.6	19.5	18.5	17.5	16.7	15.9	15.2	14.5	13.8	13.2	12.7	12.2	11.7	11.2	10.8	10.4	10.0
5.3	38.9	35.7	32.9	30.6	28.5	26.6	25.0	23.5	22.1	20.9	19.8	18.8	17.8	17.0	16.2	15.4	14.7	14.1	13.5	12.9	12.4	11.9	11.4	11.0	10.6	10.2
5.4	39.4	36.1	33.3	30.9	28.8	27.0	25.3	23.8	22.4	21.2	20.1	19.0	18.1	17.2	16.4	15.7	15.0	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.4
5.5	39.8	36.5	33.7	31.3	29.2	27.3	25.6	24.1	22.7	21.5	20.4	19.3	18.4	17.5	16.7	15.9	15.2	14.5	13.9	13.4	12.8	12.3	11.8	11.4	11.0	10.6
5.6	40.2	36.9	34.1	31.7	29.5	27.6	26.0	24.4	23.1	21.8	20.7	19.6	18.6	17.7	16.9	16.2	15.4	14.8	14.2	13.6	13.0	12.5	12.0	11.6	11.2	10.8
5.7	40.7	37.3	34.5	32.0	29.9	28.0	26.3	24.7	23.4	22.1	20.9	19.9	18.9	18.0	17.2	16.4	15.7	15.0	14.4	13.8	13.2	12.7	12.2	11.8	11.3	10.9
5.8	41.1	37.7	34.9	32.4	30.2	28.3	26.6	25.0	23.7	22.4	21.2	20.1	19.2	18.3	17.4	16.6	15.9	15.2	14.6	14.0	13.4	12.9	12.4	12.0	11.5	11.1
5.9	41.5	38.1	35.3	32.8	30.6	28.6	26.9	25.4	23.9	22.7	21.5	20.4	19.4	18.5	17.7	16.9	16.1	15.5	14.8	14.2	13.7	13.1	12.6	12.2	11.7	11.3
6.0	41.9	38.5	35.6	33.1	30.9	29.0	27.2	25.7	24.2	22.9	21.8	20.7	19.7	18.8	17.9	17.1	16.4	15.7	15.0	14.4	13.9	13.3	12.8	12.3	11.9	11.5
6.1	42.3	38.9	36.0	33.5	31.2	29.3	27.5	26.0	24.5	23.2	22.0	20.9	19.9	19.0	18.1	17.3	16.6	15.9	15.2	14.6	14.1	13.5	13.0	12.5	12.1	11.7
6.2	42.7	39.3	36.4	33.8	31.6	29.6	27.8	26.2	24.8	23.5	22.3	21.2	20.2	19.3	18.4	17.6	16.8	16.1	15.5	14.8	14.3	13.7	13.2	12.7	12.3	11.8
6.3	43.1	39.7	36.7	34.1	31.9	29.9	28.1	26.5	25.1	23.8	22.6	21.5	20.4	19.5	18.6	17.8	17.0	16.3	15.7	15.0	14.5	13.9	13.4	12.9	12.4	12.0
6.4	43.5	40.0	37.1	34.5	32.2	30.2	28.4	26.8	25.4	24.0	22.8	21.7	20.7	19.7	18.8	18.0	17.3	16.5	15.9	15.3	14.7	14.1	13.6	13.1	12.6	12.2
6.5	43.9	40.4	37.4	34.8	32.5	30.5	28.7	27.1	25.6	24.3	23.1	22.0	20.9	20.0	19.1	18.3	17.5	16.8	16.1	15.5	14.9	14.3	13.8	13.3	12.8	12.4
6.6	44.3	40.8	37.7	35.1	32.9	30.8	29.0	27.4	25.9	24.6	23.3	22.2	21.2	20.2	19.3	18.5	17.7	17.0	16.3	15.7	15.1	14.5	14.0	13.5	13.0	12.5
6.7	44.6	41.1	38.1	35.5	33.2	31.1	29.3	27.7	26.2	24.8	23.6	22.5	21.4	20.4	19.5	18.7	17.9	17.2	16.5	15.9	15.2	14.7	14.1	13.6	13.2	12.7
6.8	45.0	41.5	38.4	35.8	33.5	31.4	29.6	27.9	26.4	25.1	23.8	22.7	21.6	20.7	19.8	18.9	18.1	17.4	16.7	16.0	15.4	14.9	14.3	13.8	13.3	12.9
6.9	45.4	41.8	38.8	36.1	33.8	31.7	29.9	28.2	26.7	25.3	24.1	22.9	21.9	20.9	20.0	19.1	18.3	17.6	16.9	16.2	15.6	15.1	14.5	14.0	13.5	13.0
7.0	45.8	42.2	39.1	36.4	34.1	32.0	30.1	28.5	27.0	25.6	24.3	23.2	22.1	21.1	20.2	19.3	18.5	17.8	17.1	16.4	15.8	15.2	14.7	14.2	13.7	13.2
7.1	46.1	42.5	39.4	36.7	34.4	32.3	30.4	28.7	27.2	25.8	24.6	23.4	22.3	21.3	20.4	19.6	18.8	18.0	17.3	16.6	16.0	15.4	14.9	14.3	13.8	13.4
7.2	46.5	42.8	39.7	37.0	34.7	32.6	30.7	29.0	27.5	26.1	24.8	23.6	22.6	21.6	20.6	19.8	19.0	18.2	17.5	16.8	16.2	15.6	15.0	14.5	14.0	13.5
7.3	46.8	43.2	40.0	37.3	35.0	32.9	31.0	29.3	27.7	26.3	25.1	23.9	22.8	21.8	20.8	20.0	19.2	18.4	17.7	17.0	16.4	15.8	15.2	14.7	14.2	13.7
7.4	47.2	43.5	40.4	37.6	35.2	33.1	31.2	29.5	28.0	26.6	25.3	24.1	23.0	22.0	21.1	20.2	19.4	18.6	17.9	17.2	16.6	16.0	15.4	14.9	14.4	13.9
7.5	47.5	43.8	40.7	37.9	35.5	33.4	31.5	29.8	28.2	26.8	25.5	24.3	23.2	22.2	21.3	20.4	19.6	18.8	18.1	17.4	16.7	16.1	15.6	15.0	14.5	14.0
7.6	47.9	44.2	41.0	38.2	35.8	33.7	31.8	30.0	28.5	27.1	25.8	24.6	23.5	22.4	21.5	20.6	19.8	19.0	18.3	17.6	16.9	16.3	15.7	15.2	14.7	14.2
7.7	48.2	44.5	41.3	38.5	36.1	33.9	32.0	30.3	28.7	27.3	26.0	24.8	23.7	22.6	21.7	20.8	20.0	19.2	18.4	17.8	17.1	16.5	15.9	15.4	14.9	14.4
7.8	48.5	44.8	41.6	38.8	36.4	34.2	32.3	30.5	29.0	27.5	26.2	25.0	23.9	22.9	21.9	21.0	20.2	19.4	18.6	17.9	17.3	16.7	16.1	15.5	15.0	14.5
7.9	48.9	45.1	41.9	39.1	36.7	34.5	32.5	30.8	29.2	27.8	26.4	25.2	24.1	23.1	22.1	21.2	20.4	19.6	18.8	18.1	17.5	16.8	16.3	15.7	15.2	14.7
8.0	49.2	45.4	42.2	39.4	36.9	34.7	32.8	31.0	29.4	28.0	26.7	25.4	24.3	23.3	22.3	21.4	20.5	19.8	19.0	18.3	17.6	17.0	16.4	15.9	15.3	14.8
8.1	49.5	45.7	42.5	39.7	37.2	35.0	33.0	31.3	29.7	28.2	26.9	25.7	24.5	23.5	22.5	21.6	20.7	19.9	19.2	18.5	17.8	17.2	16.6	16.0	15.5	15.0
8.2	49.8	46.0	42.8	39.9	37.5	35.3	33.3	31.5	29.9	28.5	27.1	25.9	24.7	23.7	22.7	21.8	20.9	20.1	19.4	18.7	18.0	17.4	16.8	16.2	15.7	15.2
8.3	50.2	46.3	43.1	40.2	37.7	35.5	33.5	31.8	30.2	28.7	27.3	26.1	25.0	23.9	22.9	22.0	21.1	20.3	19.6	18.8	18.2	17.5	16.9	16.4	15.8	15.3
8.4	50.5	46.6	43.3	40.5	38.0	35.8	33.8	32.0	30.4	28.9	27.6	26.3	25.2	24.1	23.1	22.2	21.3	20.5	19.7	19.0	18.3	17.7	17.1	16.5	16.0	15.5
8.5	50.8	46.9	43.6	40.8	38.3	36.0	34.0	32.2	30.6	29.1	27.8	26.5	25.4	24.3	23.3	22.4	21.5	20.7	19.9	19.2	18.5	17.9	17.3	16.7	16.1	15.6
8.6	51.1	47.2	43.9	41.0	38.5	36.3	34.3	32.5	30.8	29.4	28.0	26.7	25.6	24.5	23.5	22.6	21.7	20.9	20.1	19.4	18.7	18.0	17.4	16.9	16.3	15.8
8.7	51.4	47.5	44.2	41.3	38.8	36.5	34.5	32.7	31.1	29.6	28.2	26.9	25.8	24.7	23.7	22.7	21.9	21.0	20.3	19.5	18.9	18.2	17.6	17.0	16.5	15.9
8.8	51.7	47.8	44.5	41.6	39.0	36.8	34.8	32.9	31.3	29.8	28.4	27.1	26.0	24.9	23.9	22.9	22.1	21.2	20.4	19.7	19.0	18.4	17.8	17.2	16.6	16.1
8.9	52.0	48.1	44.8	41.8	39.3	37.0	35.0	33.2	31.5	30.0	28.6	27.3	26.2	25.1	24.1	23.1	22.2	21.4	20.6	19.9	19.2	18.5	17.9	17.3	16.8	16.2
9.0	52.3	48.4	45.0	42.1	39.5	37.3	35.2	33.4	31.7	30.2	28.8	27.6	26.4	25.3	24.3	23.3	22.4	21.6	20.8	20.1	19.4	18.7	18.1	17.5	16.9	16.4
9.1	52.6	48.7	45.3	42.4	39.8	37.5	35.5	33.6	32.0	30.4	29.0	27.8	26.6	25.5	24.4	23.5	22.6	21.8	21.0	20.2	19.5	18.9	18.2	17.6	17.1	16.5
9.2	52.9	49.0	45.6	42.6	40.0	37.7	35.7	33.8	32.2	30.6	29.2	28.0	26.8	25.7	24.6	23.7	22.8	21.9	21.1	20.4	19.7	19.0	18.4	17.8	17.2	16.7
9.3	53.2	49.2	45.8	42.9	40.3	38.0	35.9	34.1	32.4	30.9	29.4	28.2	27.0	25.9	24.8	23.9	23.0	22.1	21.3	20.6	19.9	19.2	18.6	18.0	17.4	16.8
9.4	53.5	49.5	46.1	43.1	40.5	38.2	36.1	34.3	32.6	31.1	29.7	28.4	27.2	26.0	25.0	24.0	23.1	22.3	21.5	20.7	20.0	19.4	18.7	18.1	17.5	17.0
9.5	53.8	49.8	46.4	43.4	40.8	38.4	36.4	34.5	32.8	31.3	29.9	28.6	27.3	26.2	25.2	24.2	23.3	22.5	21.7	20.9	20.2	19.5	18.9	18.3	17.7	17.1
9.6	54.1	50.1	46.6	43.6	41.0	38.7	36.6	34.7	33.0	31.5	30.1	28.7	27.5	26.4	25.4	24.4	23.5	22.6	21.8	21.1	20.4	19.7	19.0	18.4	17.8	17.3
9.7	54.4	50.4	46.9	43.9	41.2	38.9	36.8	34.9	33.2	31.7	30.3	28.9	27.7	26.6	25.6	24.6	23.7	22.8	22.0	21.2	20.5	19.8	19.2	18.6	18.0	17.4
9.8	54.7	50.6	47.1	44.1	41.5	39.1	37.0	35.2	33.4	31.9	30.5	29.1	27.9	26.8	25.7	24.8	23.8	23.0	22.2	21.4	20.7	20.0	19.3	18.7	18.1	17.6
9.9	55.0	50.9	47.4	44.4	41.7	39.4	37.3	35.4	33.7	32.1	30.7	29.3	28.1	27.0	25.9	24.9	24.0	23.1	22.3	21.6	20.8	20.1	19.5	18.9	18.3	17.7
10.0	55.3	51.2	47.7	44.6	42.0	39.6	37.5	35.6	33.9	32.3	30.8	29.5	28.3	27.2	26.1	25.1	24.2	23.3	22.5	21.7	21.0	20.3	19.6	19.0	18.4	17.9
10.1	55.5	51.4	47.9	44.9	42.2	39.8	37.7	35.8	34.1	32.5	31.0	29.7	28.5	27.3	26.3	25.3	24.3	23.5	22.7	21.9	21.1	20.5	19.8	19.2	18.6	18.0
10.2	55.8	51.7	48.2	45.1	42.4	40.0	37.9	36.0	34.3	32.7	31.2	29.9	28.7	27.5	26.4	25.5	24.5	23.6	22.8	22.0	21.3	20.6	20.0	19.3	18.7	18.2

*Height = total tree height.

Table A5. White spruce site index prediction table at young ages in subregions 1 to 6 and 12 to 16 (continued).

Height	Ring count at 1.3 m above ground																									
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
10.3	56.1	52.0	48.4	45.3	42.7	40.3	38.1	36.2	34.5	32.9	31.4	30.1	28.8	27.7	26.6	25.6	24.7	23.8	23.0	22.2	21.5	20.8	20.1	19.5	18.9	18.3
10.4	56.4	52.2	48.7	45.6	42.9	40.5	38.4	36.4	34.7	33.1	31.6	30.3	29.0	27.9	26.8	25.8	24.9	24.0	23.1	22.4	21.6	20.9	20.3	19.6	19.0	18.5
10.5	56.6	52.5	48.9	45.8	43.1	40.7	38.6	36.6	34.9	33.3	31.8	30.5	29.2	28.1	27.0	26.0	25.0	24.1	23.3	22.5	21.8	21.1	20.4	19.8	19.2	18.6
10.6	56.9	52.7	49.2	46.1	43.3	40.9	38.8	36.8	35.1	33.5	32.0	30.6	29.4	28.2	27.1	26.1	25.2	24.3	23.5	22.7	21.9	21.2	20.6	19.9	19.3	18.7
10.7	57.2	53.0	49.4	46.3	43.6	41.1	39.0	37.0	35.3	33.7	32.2	30.8	29.6	28.4	27.3	26.3	25.4	24.5	23.6	22.8	22.1	21.4	20.7	20.1	19.5	18.9
10.8	57.5	53.2	49.6	46.5	43.8	41.4	39.2	37.2	35.5	33.9	32.4	31.0	29.8	28.6	27.5	26.5	25.5	24.6	23.8	23.0	22.2	21.5	20.9	20.2	19.6	19.0
10.9	57.7	53.5	49.9	46.8	44.0	41.6	39.4	37.4	35.7	34.0	32.6	31.2	29.9	28.8	27.7	26.6	25.7	24.8	23.9	23.1	22.4	21.7	21.0	20.4	19.8	19.2
11.0	58.0	53.7	50.1	47.0	44.2	41.8	39.6	37.6	35.9	34.2	32.7	31.4	30.1	28.9	27.8	26.8	25.8	24.9	24.1	23.3	22.5	21.8	21.2	20.5	19.9	19.3
11.1	58.2	54.0	50.4	47.2	44.5	42.0	39.8	37.8	36.1	34.4	32.9	31.6	30.3	29.1	28.0	27.0	26.0	25.1	24.3	23.5	22.7	22.0	21.3	20.7	20.0	19.4
11.2	58.5	54.2	50.6	47.4	44.7	42.2	40.0	38.0	36.2	34.6	33.1	31.7	30.5	29.3	28.2	27.1	26.2	25.3	24.4	23.6	22.8	22.1	21.4	20.8	20.2	19.6
11.3	58.8	54.5	50.8	47.7	44.9	42.4	40.2	38.2	36.4	34.8	33.3	31.9	30.6	29.4	28.3	27.3	26.3	25.4	24.6	23.8	23.0	22.3	21.6	20.9	20.3	19.7
11.4	59.0	54.7	51.1	47.9	45.1	42.6	40.4	38.4	36.6	35.0	33.5	32.1	30.8	29.6	28.5	27.5	26.5	25.6	24.7	23.9	23.1	22.4	21.7	21.1	20.5	19.9
11.5	59.3	55.0	51.3	48.1	45.3	42.8	40.6	38.6	36.8	35.2	33.7	32.3	31.0	29.8	28.7	27.6	26.7	25.7	24.9	24.1	23.3	22.6	21.9	21.2	20.6	20.0
11.6	59.5	55.2	51.5	48.3	45.5	43.0	40.8	38.8	37.0	35.4	33.8	32.4	31.2	30.0	28.8	27.8	26.8	25.9	25.0	24.2	23.4	22.7	22.0	21.4	20.7	20.1
11.7	59.8	55.5	51.8	48.6	45.7	43.3	41.0	39.0	37.2	35.5	34.0	32.6	31.3	30.1	29.0	28.0	27.0	26.1	25.2	24.4	23.6	22.9	22.2	21.5	20.9	20.3
11.8	60.0	55.7	52.0	48.8	46.0	43.5	41.2	39.2	37.4	35.7	34.2	32.8	31.5	30.3	29.2	28.1	27.1	26.2	25.3	24.5	23.7	23.0	22.3	21.6	21.0	20.4
11.9	60.3	55.9	52.2	49.0	46.2	43.7	41.4	39.4	37.6	35.9	34.4	33.0	31.7	30.5	29.3	28.3	27.3	26.4	25.5	24.7	23.9	23.1	22.5	21.8	21.2	20.6
12.0	60.5	56.2	52.4	49.2	46.4	43.9	41.6	39.6	37.8	36.1	34.5	33.1	31.8	30.6	29.5	28.4	27.4	26.5	25.6	24.8	24.0	23.3	22.6	21.9	21.3	20.7
12.1	60.8	56.4	52.7	49.4	46.6	44.1	41.8	39.8	37.9	36.3	34.7	33.3	32.0	30.8	29.6	28.6	27.6	26.7	25.8	25.0	24.2	23.4	22.7	22.1	21.4	20.8
12.2	61.0	56.6	52.9	49.6	46.8	44.3	42.0	40.0	38.1	36.4	34.9	33.5	32.2	30.9	29.8	28.7	27.8	26.8	25.9	25.1	24.3	23.6	22.9	22.2	21.6	21.0
12.3	61.3	56.9	53.1	49.9	47.0	44.5	42.2	40.2	38.3	36.6	35.1	33.6	32.3	31.1	30.0	28.9	27.9	27.0	26.1	25.3	24.5	23.7	23.0	22.3	21.7	21.1
12.4	61.5	57.1	53.3	50.1	47.2	44.7	42.4	40.3	38.5	36.8	35.2	33.8	32.5	31.3	30.1	29.1	28.1	27.1	26.2	25.4	24.6	23.9	23.2	22.5	21.8	21.2
12.5	61.8	57.3	53.6	50.3	47.4	44.9	42.6	40.5	38.7	37.0	35.4	34.0	32.7	31.4	30.3	29.2	28.2	27.3	26.4	25.5	24.8	24.0	23.3	22.6	22.0	21.4
12.6	62.0	57.6	53.8	50.5	47.6	45.1	42.8	40.7	38.9	37.2	35.6	34.2	32.8	31.6	30.4	29.4	28.4	27.4	26.5	25.7	24.9	24.1	23.4	22.8	22.1	21.5
12.7	62.3	57.8	54.0	50.7	47.8	45.3	43.0	40.9	39.0	37.3	35.8	34.3	33.0	31.8	30.6	29.5	28.5	27.6	26.7	25.8	25.0	24.3	23.6	22.9	22.2	21.6
12.8	62.5	58.0	54.2	50.9	48.0	45.4	43.2	41.1	39.2	37.5	35.9	34.5	33.2	31.9	30.8	29.7	28.7	27.7	26.8	26.0	25.2	24.4	23.7	23.0	22.4	21.8
12.9	62.7	58.3	54.4	51.1	48.2	45.6	43.3	41.3	39.4	37.7	36.1	34.7	33.3	32.1	30.9	29.8	28.8	27.9	27.0	26.1	25.3	24.6	23.8	23.2	22.5	21.9
13.0	63.0	58.5	54.7	51.3	48.4	45.8	43.5	41.4	39.6	37.8	36.3	34.8	33.5	32.2	31.1	30.0	29.0	28.0	27.1	26.3	25.5	24.7	24.0	23.3	22.6	22.0
13.1	63.2	58.7	54.9	51.5	48.6	46.0	43.7	41.6	39.7	38.0	36.4	35.0	33.6	32.4	31.2	30.1	29.1	28.2	27.3	26.4	25.6	24.8	24.1	23.4	22.8	22.2
13.2	63.4	58.9	55.1	51.7	48.8	46.2	43.9	41.8	39.9	38.2	36.6	35.1	33.8	32.5	31.4	30.3	29.3	28.3	27.4	26.6	25.7	25.0	24.3	23.6	22.9	22.3
13.3	63.7	59.2	55.3	51.9	49.0	46.4	44.1	42.0	40.1	38.4	36.8	35.3	34.0	32.7	31.5	30.4	29.4	28.5	27.6	26.7	25.9	25.1	24.4	23.7	23.0	22.4
13.4	63.9	59.4	55.5	52.2	49.2	46.6	44.3	42.2	40.3	38.5	36.9	35.5	34.1	32.9	31.7	30.6	29.6	28.6	27.7	26.8	26.0	25.3	24.5	23.8	23.2	22.5
13.5	64.1	59.6	55.7	52.4	49.4	46.8	44.5	42.3	40.4	38.7	37.1	35.6	34.3	33.0	31.8	30.7	29.7	28.7	27.8	27.0	26.2	25.4	24.7	24.0	23.3	22.7
13.6	64.4	59.8	55.9	52.6	49.6	47.0	44.6	42.5	40.6	38.9	37.3	35.8	34.4	33.2	32.0	30.9	29.9	28.9	28.0	27.1	26.3	25.5	24.8	24.1	23.4	22.8
13.7	64.6	60.0	56.1	52.8	49.8	47.2	44.8	42.7	40.8	39.0	37.4	36.0	34.6	33.3	32.1	31.0	30.0	29.0	28.1	27.3	26.4	25.7	24.9	24.2	23.6	22.9
13.8	64.8	60.3	56.3	53.0	50.0	47.3	45.0	42.9	41.0	39.2	37.6	36.1	34.7	33.5	32.3	31.2	30.2	29.2	28.3	27.4	26.6	25.8	25.1	24.4	23.7	23.1
13.9	65.1	60.5	56.6	53.2	50.2	47.5	45.2	43.1	41.1	39.4	37.8	36.3	34.9	33.6	32.4	31.3	30.3	29.3	28.4	27.5	26.7	25.9	25.2	24.5	23.8	23.2
14.0	65.3	60.7	56.8	53.4	50.4	47.7	45.4	43.2	41.3	39.5	37.9	36.4	35.1	33.8	32.6	31.5	30.4	29.5	28.5	27.7	26.9	26.1	25.3	24.6	24.0	23.3
14.1	65.5	60.9	57.0	53.5	50.6	47.9	45.5	43.4	41.5	39.7	38.1	36.6	35.2	33.9	32.7	31.6	30.6	29.6	28.7	27.8	27.0	26.2	25.5	24.8	24.1	23.4
14.2	65.7	61.1	57.2	53.7	50.7	48.1	45.7	43.6	41.6	39.9	38.2	36.8	35.4	34.1	32.9	31.8	30.7	29.8	28.8	28.0	27.1	26.3	25.6	24.9	24.2	23.6
14.3	66.0	61.3	57.4	53.9	50.9	48.3	45.9	43.7	41.8	40.0	38.4	36.9	35.5	34.2	33.0	31.9	30.9	29.9	29.0	28.1	27.3	26.5	25.7	25.0	24.3	23.7
14.4	66.2	61.5	57.6	54.1	51.1	48.5	46.1	43.9	42.0	40.2	38.6	37.1	35.7	34.4	33.2	32.1	31.0	30.0	29.1	28.2	27.4	26.6	25.9	25.2	24.5	23.8
14.5	66.4	61.8	57.8	54.3	51.3	48.6	46.2	44.1	42.1	40.4	38.7	37.2	35.8	34.5	33.3	32.2	31.2	30.2	29.2	28.4	27.5	26.7	26.0	25.3	24.6	24.0
14.6	66.6	62.0	58.0	54.5	51.5	48.8	46.4	44.3	42.3	40.5	38.9	37.4	36.0	34.7	33.5	32.4	31.3	30.3	29.4	28.5	27.7	26.9	26.1	25.4	24.7	24.1
14.7	66.9	62.2	58.2	54.7	51.7	49.0	46.6	44.4	42.5	40.7	39.0	37.5	36.1	34.8	33.6	32.5	31.4	30.5	29.5	28.6	27.8	27.0	26.3	25.5	24.9	24.2
14.8	67.1	62.4	58.4	54.9	51.9	49.2	46.8	44.6	42.6	40.8	39.2	37.7	36.3	35.0	33.8	32.6	31.6	30.6	29.7	28.8	27.9	27.1	26.4	25.7	25.0	24.3
14.9	67.3	62.6	58.6	55.1	52.1	49.4	46.9	44.8	42.8	41.0	39.4	37.8	36.4	35.1	33.9	32.8	31.7	30.7	29.8	28.9	28.1	27.3	26.5	25.8	25.1	24.5
15.0	67.5	62.8	58.8	55.3	52.2	49.5	47.1	44.9	43.0	41.2	39.5	38.0	36.6	35.3	34.1	32.9	31.9	30.9	29.9	29.0	28.2	27.4	26.6	25.9	25.2	24.6
15.1	67.7	63.0	59.0	55.5	52.4	49.7	47.3	45.1	43.1	41.3	39.7	38.1	36.7	35.4	34.2	33.1	32.0	31.0	30.1	29.2	28.3	27.5	26.8	26.1	25.4	24.7
15.2	67.9	63.2	59.2	55.7	52.6	49.9	47.5	45.3	43.3	41.5	39.8	38.3	36.9	35.6	34.4	33.2	32.1	31.1	30.2	29.3	28.5	27.7	26.9	26.2	25.5	24.8
15.3	68.2	63.4	59.4	55.9	52.8	50.1	47.6	45.4	43.4	41.6	40.0	38.5	37.0	35.7	34.5	33.4	32.3	31.3	30.3	29.4	28.6	27.8	27.0	26.3	25.6	25.0
15.4	68.4	63.6	59.6	56.0	53.0	50.2	47.8	45.6	43.6	41.8	40.1	38.6	37.2	35.9	34.6	33.5	32.4	31.4	30.5	29.6	28.7	27.9	27.2	26.4	25.7	25.1
15.5	68.6	63.8	59.8	56.2	53.1	50.4	48.0	45.8	43.8	42.0	40.3	38.8	37.3	36.0	34.8	33.6	32.6	31.6	30.6	29.7	28.9	28.1	27.3	26.6	25.9	25.2
15.6	68.8	64.0	59.9	56.4	53.3	50.6	48.1	45.9	43.9	42.1	40.4	38.9	37.5	36.2	34.9	33.8	32.7	31.7	30.7	29.8	29.0	28.2	27.4	26.7	26.0	25.3
15.7	69.0	64.2	60.1	56.6	53.5	50.8	48.3	46.1	44.1	42.3	40.6	39.1	37.6	36.3	35.1	33.9	32.8	31.8	30.9	30.0	29.1	28.3	27.5	26.8	26.1	25.5
15.8	69.2	64.4	60.3	56.8	53.7	50.9	48.5	46.3	44.3	42.4	40.7	39.2	37.8	36.4	35.2	34.1	33.0	32.0	31.0	30.1	29.2	28.4	27.7	26.9	26.2	25.6
15.9	69.4	64.6	60.5	57.0	53.9	51.1	48.6	46.4	44.4	42.6	40.9	39.4	37.9	36.6	35.4	34.2	33.1	32.1	31.1	30.2	29.4	28.6	27.8	27.1	26.4	25.7
16.0	69.6	64.8	60.7	57.2	54.0	51.3	48.8	46.6	44.6	42.7	41.0	39.5	38.1	36.7	35.5	34.3	33.3	32.2	31.3	30.4	29.5	28.7	27.9	27.2	26.5	25.8
16.1	69.9	65.0	60.9	57.3	54.2	51.4	49.0	46.7	44.7	42.9	41.2	39.6	38.2	36.9	35.6	34.5	33.4	32.4	31.4	30.5	29.6	28.8	28.0	27.3	26.6	25.9
16.2	70.1	65.2	61.1	57.5	54.4	51.6	49.1	46.9	44.9	43.0	41.4	39.8	38.4	37.0	35.8	34.6	33.5	32.5	31.5	30.6	29.8	28.9	28.2	27.4	26.7	26.1
16.3	70.3	65.4	61.3	57.7	54.6	51.8	49.3	47.1	45.0	43.2	41.5	39.9	38.5	37.2	35.9	34.8	33.7	32.6	31.7	30.8	29.9	29.1	28.3	27.6	26.9	26.2
16.4	70.5	65.6	61.5	57.9	54.7	52.0	49.5	47.2	45.2	43.3	41.7	40.1	38.6	37.3	36.1	34.9	33.8	32.8	31.8	30.9	30.0	29.2	28.4	27.7	27.0	26.3
16.5	70.7	65.8	61.7	58.1	54.9	52.1	49.6	47.4	45.4	43.5	41.8	40.2	38.8	37.4	36.2	35.0	33.9	32.9	31.9	31.0	30.1	29.3	28.5	27.8	27.1	26.4
16.6	70.9	66.0	61.8	58.2	55.1	52.3	49.8	47.5	45.5	43.7	41.9	40.4	38.9	37.6	36.3	35.2	34.1	33.0	32.1	31.1	30.3	29.5	28.7	27.9	27.2	26.5
16.7	71.1	66.2	62.0	58.4	55.3	52.5	50.0	47.7	45.7	43.8	42.1	40.5	39.1	37.7	36.5	35.3	34.2	33.2	32.2	31.3	30.4	29.6	28.8	28.1	27.3	26.7
16.8	71.3	66.4	62.2	58.6	55.4	52.6	50.1	47.9	45.8	44.0	42.2	40.7	39.2	37.9	36.6	35.4	34.3	33.3	32.3	31.4	30.5	29.7	28.9	28.2	27.5	26.8
16.9	71.5	66.6	62.4	58.8	55.6	52.8	50.3	48.0	46.0	44.1	42.4	40.8	39.4	38.0	36.7	35.6	34.5	33.4	32.5	31.5	30.7	29.8	29.0	28.3	27.6	26.9
17.0	71.7	66.8	62.6	59.0	55.8	53.0	50.4	48.2	46.1	44.3	42.5	41.0	39.5	38.1	36.9	35.7	34.6	33.6	32.6	31.7	30.8	30.0	29.2	28.4	27.7	27.0
17.1	71.9	67.0	62.8	59.1	55.9	53.1	50.6	48.3	46.3	44.4	42.7	41.1	39.6	38.3	37.0	35.8	34.7	33.7	32.7	31.8	30.9	30.1	29.3	28.5	27.8	27.1
17.2	72.1	67.2	63.0	59.3	56.1	53.3	50.8	48.5	46.4	44.6	42.8	41.2	39.8	38.4	37.2	36.0	34.9	33.8	32.8	31.9	31.0	30.2	29.4	28.7	27.9	27.3
17.3	72.3	67.4	63.1	59.5	56.3	53.5	50.9	48.6	46.6	44.7	43.0	41.4	39.9	38.6	37.3	36.1	35.0	34.0	33.0	32.0	31.2	30.3	29.5	28.8	28.1	27.4
17.4	72.5	67.5	63.3	59.7	56.5	53.6	51.1	48.8	46.7	44.8	43.1	41.5	40.1	38.7	37.4	36.2	35.1	34.1	33.1	32.2	31.3	30.5	29.7	28.9	28.2	27.5
17.5	72.7	67.7	63.5	59.8	56.6	53.8	51.2	49.0	46.9	45.0	43.3	41.7	40.2	38.8	37.6	36.4	35.3	34.2	33.2	32.3	31.4	30.6	29.8	29.0	28.3	27.6
17.6	72.9	67.9	63.7	60.0	56.8	53.9	51.4	49.1	47.0	45.1	43.4	41.8	40.3	39.0	37.7	36.5	35.4	34.3	33.4	32.4	31.5	30.7	29.9	29.1	28.4	27.7
17.7	73.1	68.1	63.9	60.2	57.0	54.1	51.6	49.3	47.2	45.3	43.6	42.0	40.5	39.1	37.8	36.6	35.5	34.5	33.5	32.5	31.7	30.8	30.0	29.3	28.5	27.9
17.8	73.3	68.3	64.0	60.4	57.1	54.3	51.7	49.4	47.3	45.4	43.7	42.1	40.6	39.2	38.0	36.8	35.7	34.6	33.6	32.7	31.8	30.9	30.1	29.4	28.7	28.0
17.9	73.5	68.5	64.2	60.5	57.3	54.4	51.9	49.6	47.5	45.6	43.8	42.2	40.8	39.4	38.1	36.9	35.8	34.7	33.7	32.8	31.9	31.1	30.3	29.5	28.8	28.1
18.0	73.7	68.7	64.4	60.7	57.5	54.6	52.0	49.7	47.6	45.7	44.0	42.4	40.9	39.5	38.2	37.0	35.9	34.9	33.9	32.9	32.0	31.2	30.4	29.6	28.9	28.2
18.1	73.9	68.9	64.6	60.9	57.6	54.8	52.2	49.9	47.8	45.9	44.1	42.5	41.0	39.7	38.4	37.2	36.0	35.0	34.0	33.0	32.2	31.3	30.5	29.7	29.0	28.3
18.2	74.1	69.0	64.8	61.0	57.8	54.9	52.3	50.0	47.9	46.0	44.3	42.7	41.2	39.8	38.5	37.3	36.2	35.1	34.1	33.2	32.3	31.4	30.6	29.9	29.1	28.4
18.3	74.3	69.2	64.9	61.2	58.0	55.1	52.5	50.2	48.1	46.2	44.4	42.8	41.3	39.9	38.6	37.4	36.3	35.2	34.2	33.3	32.4	31.6	30.8	30.0	29.3	28.6
18.4	74.5	69.4	65.1	61.4	58.1	55.2	52.7	50.3	48.2	46.3	44.6	42.9	41.4	40.1	38.8	37.6	36.4	35.4	34.4	33.4	32.5	31.7	30.9	30.1	29.4	28.7
18.5	74.6	69.6	65.3	61.6	58.3	55.4	52.8	50.5	48.4	46.5	44.7	43.1	41.6	40.2	38.9	37.7	36.6	35.5	34.5	33.5	32.6	31.8	31.0	30.2	29.5	28.8
18.6	74.8	69.8	65.5	61.7	58.4	55.6	53.0	50.6	48.5	46.6	44.8	43.2	41.7	40.3	39.0	37.8	36.7	35.6	34.6	33.7	32.8	31.9	31.1	30.3	29.6	28.9
18.7	75.0	70.0	65.6	61.9	58.6	55.7	53.1	50.8	48.7	46.7	45.0	43.4	41.9	40.5	39.2	37.9	36.8	35.7	34.7	33.8	32.9	32.0	31.2	30.5	29.7	29.0
18.8	75.2	70.1	65.8	62.1	58.8	55.9	53.3	50.9	48.8	46.9	45.1	43.5	42.0	40.6	39.3	38.1	36.9	35.9	34.9	33.9	33.0	32.2	31.4	30.6	29.8	29.1
18.9	75.4	70.3	66.0	62.2	58.9	56.0	53.4	51.1	49.0	47.0	45.3	43.6	42.1	40.7	39.4	38.2	37.1	36.0	35.0	34.0	33.1	32.3	31.5	30.7	30.0	29.3

*Height = total tree height.

Table A6. White spruce site index prediction table at young ages in subregions 7 to 10.

Height	Ring count at 1.3 m above ground																											
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																											
1.5	6.1	5.5	4.9	4.5	4.1	3.8	3.6	3.3	3.2	3.0	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8
1.6	8.0	7.2	6.5	5.9	5.4	5.0	4.6	4.3	4.0	3.8	3.6	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.1	2.1
1.7	9.7	8.7	7.8	7.1	6.5	6.0	5.5	5.1	4.8	4.5	4.2	4.0	3.8	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.6	2.5	2.4	2.4
1.8	11.3	10.1	9.1	8.3	7.6	7.0	6.4	6.0	5.6	5.2	4.9	4.6	4.3	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6
1.9	12.7	11.4	10.3	9.4	8.6	7.9	7.3	6.7	6.3	5.9	5.5	5.2	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9
2.0	14.0	12.6	11.4	10.4	9.5	8.8	8.1	7.5	7.0	6.5	6.1	5.7	5.4	5.1	4.9	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1
2.1	15.2	13.7	12.5	11.4	10.4	9.6	8.9	8.2	7.6	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4
2.2	16.4	14.8	13.4	12.3	11.3	10.4	9.6	8.9	8.3	7.7	7.3	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6
2.3	17.5	15.8	14.4	13.2	12.1	11.1	10.3	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.9
2.4	18.5	16.8	15.3	14.0	12.9	11.9	11.0	10.2	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1
2.5	19.5	17.7	16.2	14.8	13.6	12.6	11.6	10.8	10.1	9.4	8.8	8.3	7.8	7.4	7.0	6.7	6.3	6.0	5.7	5.5	5.3	5.0	4.8	4.7	4.5	4.3
2.6	20.5	18.6	17.0	15.6	14.3	13.2	12.3	11.4	10.7	10.0	9.3	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.6
2.7	21.4	19.5	17.8	16.3	15.0	13.9	12.9	12.0	11.2	10.5	9.8	9.3	8.7	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8
2.8	22.3	20.3	18.5	17.0	15.7	14.5	13.5	12.6	11.7	11.0	10.3	9.7	9.2	8.6	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0
2.9	23.2	21.1	19.3	17.7	16.4	15.1	14.1	13.1	12.3	11.5	10.8	10.1	9.6	9.0	8.6	8.1	7.7	7.4	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3
3.0	24.0	21.8	20.0	18.4	17.0	15.7	14.6	13.6	12.8	12.0	11.2	10.6	10.0	9.4	8.9	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5
3.1	24.8	22.6	20.7	19.1	17.6	16.3	15.2	14.2	13.2	12.4	11.7	11.0	10.4	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9	5.7
3.2	25.5	23.3	21.4	19.7	18.2	16.9	15.7	14.7	13.7	12.9	12.1	11.4	10.8	10.2	9.7	9.2	8.7	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.1	5.9
3.3	26.3	24.0	22.0	20.3	18.8	17.5	16.2	15.2	14.2	13.3	12.5	11.8	11.2	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.5	7.2	6.9	6.6	6.4	6.1
3.4	27.0	24.7	22.7	20.9	19.4	18.0	16.8	15.7	14.7	13.8	13.0	12.2	11.5	10.9	10.4	9.8	9.4	8.9	8.5	8.1	7.8	7.5	7.1	6.9	6.6	6.4
3.5	27.7	25.4	23.3	21.5	19.9	18.5	17.3	16.1	15.1	14.2	13.4	12.6	11.9	11.3	10.7	10.2	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6
3.6	28.4	26.0	23.9	22.1	20.5	19.0	17.8	16.6	15.6	14.6	13.8	13.0	12.3	11.6	11.0	10.5	10.0	9.5	9.1	8.7	8.3	8.0	7.6	7.3	7.0	6.8
3.7	29.1	26.7	24.5	22.7	21.0	19.5	18.2	17.1	16.0	15.0	14.2	13.4	12.6	12.0	11.4	10.8	10.3	9.8	9.4	8.9	8.6	8.2	7.9	7.6	7.3	7.0
3.8	29.8	27.3	25.1	23.2	21.5	20.0	18.7	17.5	16.4	15.4	14.6	13.7	13.0	12.3	11.7	11.1	10.6	10.1	9.6	9.2	8.8	8.4	8.1	7.8	7.5	7.2
3.9	30.4	27.9	25.7	23.8	22.0	20.5	19.2	17.9	16.8	15.8	14.9	14.1	13.3	12.6	12.0	11.4	10.9	10.4	9.9	9.5	9.1	8.7	8.3	8.0	7.7	7.4
4.0	31.0	28.5	26.2	24.3	22.5	21.0	19.6	18.4	17.3	16.2	15.3	14.5	13.7	13.0	12.3	11.7	11.2	10.6	10.2	9.7	9.3	8.9	8.6	8.2	7.9	7.6
4.1	31.7	29.1	26.8	24.8	23.0	21.5	20.1	18.8	17.7	16.6	15.7	14.8	14.0	13.3	12.6	12.0	11.5	10.9	10.4	10.0	9.6	9.2	8.8	8.4	8.1	7.8
4.2	32.3	29.6	27.3	25.3	23.5	21.9	20.5	19.2	18.1	17.0	16.0	15.2	14.4	13.6	12.9	12.3	11.7	11.2	10.7	10.2	9.8	9.4	9.0	8.7	8.3	8.0
4.3	32.9	30.2	27.9	25.8	24.0	22.4	20.9	19.6	18.5	17.4	16.4	15.5	14.7	13.9	13.3	12.6	12.0	11.5	11.0	10.5	10.0	9.6	9.2	8.9	8.5	8.2
4.4	33.4	30.7	28.4	26.3	24.5	22.8	21.4	20.0	18.8	17.7	16.8	15.9	15.0	14.3	13.6	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.1	8.8	8.4
4.5	34.0	31.3	28.9	26.8	24.9	23.3	21.8	20.4	19.2	18.1	17.1	16.2	15.3	14.6	13.8	13.2	12.6	12.0	11.5	11.0	10.5	10.1	9.7	9.3	9.0	8.6
4.6	34.6	31.8	29.4	27.3	25.4	23.7	22.2	20.8	19.6	18.5	17.5	16.5	15.7	14.9	14.1	13.5	12.8	12.3	11.7	11.2	10.8	10.3	9.9	9.5	9.2	8.8
4.7	35.1	32.3	29.9	27.7	25.8	24.1	22.6	21.2	20.0	18.8	17.8	16.8	16.0	15.2	14.4	13.7	13.1	12.5	12.0	11.5	11.0	10.5	10.1	9.7	9.4	9.0
4.8	35.7	32.8	30.4	28.2	26.3	24.5	23.0	21.6	20.3	19.2	18.1	17.2	16.3	15.5	14.7	14.0	13.4	12.8	12.2	11.7	11.2	10.8	10.3	9.9	9.6	9.2
4.9	36.2	33.3	30.8	28.6	26.7	24.9	23.4	22.0	20.7	19.5	18.5	17.5	16.6	15.8	15.0	14.3	13.6	13.0	12.5	11.9	11.4	11.0	10.6	10.1	9.8	9.4
5.0	36.7	33.8	31.3	29.1	27.1	25.3	23.8	22.3	21.0	19.9	18.8	17.8	16.9	16.1	15.3	14.6	13.9	13.3	12.7	12.2	11.7	11.2	10.8	10.4	10.0	9.6
5.1	37.3	34.3	31.8	29.5	27.5	25.7	24.1	22.7	21.4	20.2	19.1	18.1	17.2	16.3	15.6	14.8	14.2	13.5	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.8
5.2	37.8	34.8	32.2	30.0	27.9	26.1	24.5	23.1	21.7	20.5	19.4	18.4	17.5	16.6	15.8	15.1	14.4	13.8	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.0
5.3	38.3	35.3	32.7	30.4	28.4	26.5	24.9	23.4	22.1	20.9	19.7	18.7	17.8	16.9	16.1	15.4	14.7	14.0	13.4	12.9	12.3	11.9	11.4	11.0	10.6	10.2
5.4	38.8	35.8	33.1	30.8	28.8	26.9	25.3	23.8	22.4	21.2	20.1	19.0	18.1	17.2	16.4	15.6	14.9	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.7	10.4
5.5	39.3	36.2	33.6	31.2	29.2	27.3	25.6	24.1	22.7	21.5	20.4	19.3	18.4	17.5	16.6	15.9	15.2	14.5	13.9	13.3	12.8	12.3	11.8	11.4	10.9	10.5
5.6	39.7	36.7	34.0	31.6	29.5	27.7	26.0	24.5	23.1	21.8	20.7	19.6	18.6	17.7	16.9	16.1	15.4	14.7	14.1	13.5	13.0	12.5	12.0	11.6	11.1	10.7
5.7	40.2	37.1	34.4	32.0	29.9	28.0	26.3	24.8	23.4	22.1	21.0	19.9	18.9	18.0	17.2	16.4	15.7	15.0	14.4	13.8	13.2	12.7	12.2	11.7	11.3	10.9
5.8	40.7	37.6	34.8	32.4	30.3	28.4	26.7	25.1	23.7	22.4	21.3	20.2	19.2	18.3	17.4	16.6	15.9	15.2	14.6	14.0	13.4	12.9	12.4	11.9	11.5	11.1
5.9	41.1	38.0	35.3	32.8	30.7	28.8	27.0	25.5	24.0	22.7	21.6	20.5	19.5	18.5	17.7	16.9	16.1	15.4	14.8	14.2	13.6	13.1	12.6	12.1	11.7	11.3
6.0	41.6	38.4	35.7	33.2	31.1	29.1	27.4	25.8	24.4	23.1	21.9	20.8	19.7	18.8	17.9	17.1	16.4	15.7	15.0	14.4	13.8	13.3	12.8	12.3	11.9	11.5
6.1	42.1	38.9	36.1	33.6	31.4	29.5	27.7	26.1	24.7	23.4	22.1	21.0	20.0	19.1	18.2	17.4	16.6	15.9	15.2	14.6	14.1	13.5	13.0	12.5	12.1	11.6
6.2	42.5	39.3	36.5	34.0	31.8	29.8	28.0	26.4	25.0	23.7	22.4	21.3	20.3	19.3	18.4	17.6	16.8	16.1	15.5	14.8	14.3	13.7	13.2	12.7	12.2	11.8
6.3	42.9	39.7	36.9	34.4	32.2	30.2	28.4	26.8	25.3	23.9	22.7	21.6	20.5	19.6	18.7	17.9	17.1	16.4	15.7	15.1	14.5	13.9	13.4	12.9	12.4	12.0
6.4	43.4	40.1	37.3	34.8	32.5	30.5	28.7	27.1	25.6	24.2	23.0	21.9	20.8	19.8	18.9	18.1	17.3	16.6	15.9	15.3	14.7	14.1	13.6	13.1	12.6	12.2
6.5	43.8	40.5	37.7	35.1	32.9	30.8	29.0	27.4	25.9	24.5	23.3	22.1	21.1	20.1	19.2	18.3	17.5	16.8	16.1	15.5	14.9	14.3	13.8	13.3	12.8	12.3
6.6	44.2	40.9	38.0	35.5	33.2	31.2	29.4	27.7	26.2	24.8	23.6	22.4	21.3	20.3	19.4	18.6	17.8	17.0	16.3	15.7	15.1	14.5	14.0	13.5	13.0	12.5
6.7	44.7	41.3	38.4	35.8	33.6	31.5	29.7	28.0	26.5	25.1	23.8	22.7	21.6	20.6	19.7	18.8	18.0	17.2	16.5	15.9	15.3	14.7	14.2	13.6	13.2	12.7
6.8	45.1	41.7	38.8	36.2	33.9	31.8	30.0	28.3	26.8	25.4	24.1	22.9	21.8	20.8	19.9	19.0	18.2	17.5	16.8	16.1	15.5	14.9	14.3	13.8	13.3	12.9
6.9	45.5	42.1	39.2	36.6	34.2	32.2	30.3	28.6	27.1	25.7	24.4	23.2	22.1	21.1	20.1	19.3	18.4	17.7	17.0	16.3	15.7	15.1	14.5	14.0	13.5	13.0
7.0	45.9	42.5	39.5	36.9	34.6	32.5	30.6	28.9	27.4	25.9	24.6	23.4	22.3	21.3	20.4	19.5	18.7	17.9	17.2	16.5	15.9	15.3	14.7	14.2	13.7	13.2
7.1	46.3	42.9	39.9	37.3	34.9	32.8	30.9	29.2	27.6	26.2	24.9	23.7	22.6	21.6	20.6	19.7	18.9	18.1	17.4	16.7	16.1	15.5	14.9	14.4	13.9	13.4
7.2	46.7	43.3	40.3	37.6	35.2	33.1	31.2	29.5	27.9	26.5	25.2	23.9	22.8	21.8	20.8	19.9	19.1	18.3	17.6	16.9	16.3	15.7	15.1	14.5	14.0	13.6
7.3	47.1	43.6	40.6	37.9	35.6	33.4	31.5	29.8	28.2	26.8	25.4	24.2	23.1	22.0	21.1	20.2	19.3	18.5	17.8	17.1	16.4	15.8	15.3	14.7	14.2	13.7
7.4	47.5	44.0	41.0	38.3	35.9	33.8	31.8	30.1	28.5	27.0	25.7	24.5	23.3	22.3	21.3	20.4	19.5	18.7	18.0	17.3	16.6	16.0	15.4	14.9	14.4	13.9
7.5	47.9	44.4	41.3	38.6	36.2	34.1	32.1	30.4	28.8	27.3	25.9	24.7	23.6	22.5	21.5	20.6	19.7	18.9	18.2	17.5	16.8	16.2	15.6	15.1	14.6	14.1
7.6	48.3	44.8	41.7	39.0	36.5	34.4	32.4	30.6	29.0	27.5	26.2	24.9	23.8	22.7	21.7	20.8	20.0	19.1	18.4	17.7	17.0	16.4	15.8	15.3	14.7	14.2
7.7	48.6	45.1	42.0	39.3	36.9	34.7	32.7	30.9	29.3	27.8	26.4	25.2	24.0	23.0	22.0	21.0	20.2	19.4	18.6	17.9	17.2	16.6	16.0	15.4	14.9	14.4
7.8	49.0	45.5	42.4	39.6	37.2	35.0	33.0	31.2	29.6	28.1	26.7	25.4	24.3	23.2	22.2	21.2	20.4	19.6	18.8	18.1	17.4	16.8	16.2	15.6	15.1	14.6
7.9	49.4	45.8	42.7	39.9	37.5	35.3	33.3	31.5	29.8	28.3	26.9	25.7	24.5	23.4	22.4	21.5	20.6	19.8	19.0	18.3	17.6	16.9	16.3	15.8	15.2	14.7
8.0	49.8	46.2	43.0	40.3	37.8	35.6	33.6	31.7	30.1	28.6	27.2	25.9	24.7	23.6	22.6	21.7	20.8	20.0	19.2	18.5	17.8	17.1	16.5	15.9	15.4	14.9
8.1	50.1	46.5	43.4	40.6	38.1	35.9	33.8	32.0	30.4	28.8	27.4	26.2	25.0	23.9	22.8	21.9	21.0	20.2	19.4	18.6	18.0	17.3	16.7	16.1	15.6	15.1
8.2	50.5	46.9	43.7	40.9	38.4	36.1	34.1	32.3	30.6	29.1	27.7	26.4	25.2	24.1	23.1	22.1	21.2	20.4	19.6	18.8	18.1	17.5	16.9	16.3	15.7	15.2
8.3	50.9	47.2	44.0	41.2	38.7	36.4	34.4	32.6	30.9	29.3	27.9	26.6	25.4	24.3	23.3	22.3	21.4	20.6	19.8	19.0	18.3	17.7	17.0	16.5	15.9	15.4
8.4	51.2	47.6	44.4	41.5	39.0	36.7	34.7	32.8	31.1	29.6	28.2	26.9	25.6	24.5	23.5	22.5	21.6	20.8	20.0	19.2	18.5	17.8	17.2	16.6	16.1	15.5
8.5	51.6	47.9	44.7	41.8	39.3	37.0	35.0	33.1	31.4	29.8	28.4	27.1	25.9	24.7	23.7	22.7	21.8	20.9	20.1	19.4	18.7	18.0	17.4	16.8	16.2	15.7
8.6	51.9	48.2	45.0	42.1	39.6	37.3	35.2	33.4	31.6	30.1	28.6	27.3	26.1	25.0	23.9	22.9	22.0	21.1	20.3	19.6	18.9	18.2	17.6	17.0	16.4	15.9
8.7	52.3	48.6	45.3	42.4	39.9	37.6	35.5	33.6	31.9	30.3	28.9	27.5	26.3	25.2	24.1	23.1	22.2	21.3	20.5	19.8	19.0	18.4	17.7	17.1	16.6	16.0
8.8	52.6	48.9	45.6	42.7	40.2	37.9	35.8	33.9	32.1	30.6	29.1	27.8	26.5	25.4	24.3	23.3	22.4	21.5	20.7	19.9	19.2	18.5	17.9	17.3	16.7	16.2
8.9	53.0	49.2	46.0	43.0	40.5	38.1	36.0	34.1	32.4	30.8	29.3	28.0	26.8	25.6	24.5	23.5	22.6	21.7	20.9	20.1	19.4	18.7	18.1	17.5	16.9	16.3
9.0	53.3	49.6	46.3	43.3	40.7	38.4	36.3	34.4	32.6	31.0	29.6	28.2	27.0	25.8	24.7	23.7	22.8	21.9	21.1	20.3	19.6	18.9	18.2	17.6	17.0	16.5
9.1	53.7	49.9	46.6	43.6	41.0	38.7	36.6	34.6	32.9	31.3	29.8	28.4	27.2	26.0	24.9	23.9	23.0	22.1	21.3	20.5	19.8	19.1	18.4	17.8	17.2	16.6
9.2	54.0	50.2	46.9	43.9	41.3	38.9	36.8	34.9	33.1	31.5	30.0	28.7	27.4	26.2	25.1	24.1	23.2	22.3	21.5	20.7	19.9	19.2	18.6	18.0	17.4	16.8
9.3	54.4	50.5	47.2	44.2	41.6	39.2	37.1	35.1	33.4	31.8	30.3	28.9	27.6	26.4	25.3	24.3	23.4	22.5	21.6	20.8	20.1	19.4	18.7	18.1	17.5	17.0
9.4	54.7	50.9	47.5	44.5	41.9	39.5	37.3	35.4	33.6	32.0	30.5	29.1	27.8	26.7	25.5	24.5	23.6	22.7	21.8	21.0	20.3	19.6	18.9	18.3	17.7	17.1
9.5	55.0	51.2	47.8	44.8	42.1	39.8	37.6	35.6	33.9	32.2	30.7	29.3	28.0	26.9	25.8	24.7	23.8	22.8	22.0	21.2	20.5	19.7	19.1	18.4	17.8	17.3
9.6	55.3	51.5	48.1	45.1	42.4	40.0	37.8	35.9	34.1	32.4	30.9	29.5	28.3	27.1	26.0	24.9	23.9	23.0	22.2	21.4	20.6	19.9	19.2	18.6	18.0	17.4
9.7	55.7	51.8	48.4	45.4	42.7	40.3	38.1	36.1	34.3	32.7	31.2	29.8	28.5	27.3	26.1	25.1	24.1	23.2	22.4	21.6	20.8	20.1	19.4	18.8	18.2	17.6
9.8	56.0	52.1	48.7	45.7	43.0	40.5	38.4	36.4	34.6	32.9	31.4	30.0	28.7	27.5	26.3	25.3	24.3	23.4	22.5	21.7	21.0	20.2	19.6	18.9	18.3	17.7
9.9	56.3	52.4	49.0	45.9	43.2	40.8	38.6	36.6	34.8	33.1	31.6	30.2	28.9	27.7	26.5	25.5	24.5	23.6	22.7	21.9	21.1	20.4	19.7	19.1	18.5	17.9
10.0	56.6	52.7	49.3	46.2	43.5	41.1	38.9	36.9	35.0	33.4	31.8	30.4	29.1	27.9	26.7	25.7	24.7	23.8	22.9	22.1	21.3	20.6	19.9	19.2	18.6	18.0
10.1	57.0	53.0	49.6	46.5	43.8	41.3	39.1	37.1	35.3	33.6	32.0	30.6	29.3	28.1	26.9	25.9	24.9	23.9	23.1	22.2	21.5	20.7	20.1	19.4	18.8	18.2
10.2	57.3	53.3	49.8	46.8	44.0	41.6	39.3	37.3	35.5	33.8	32.3	30.8	29.5	28.3	27.1	26.1	25.1	24.1	23.2	22.4	21.6	20.9	20.2	19.6	18.9	18.3

*Height = total tree height.

Table A6. White spruce site index prediction table at young ages in subregions 7 to 10 (continued).

Height	Ring count at 1.3 m above ground																										
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																										
10.3	57.6	53.6	50.1	47.0	44.3	41.8	39.6	37.6	35.7	34.0	32.5	31.0	29.7	28.5	27.3	26.2	25.2	24.3	23.4	22.6	21.8	21.1	20.4	19.7	19.1	18.5
10.4	57.9	53.9	50.4	47.3	44.6	42.1	39.8	37.8	35.9	34.2	32.7	31.2	29.9	28.7	27.5	26.4	25.4	24.5	23.6	22.8	22.0	21.2	20.5	19.9	19.2	18.6
10.5	58.2	54.2	50.7	47.6	44.8	42.3	40.1	38.0	36.2	34.5	32.9	31.4	30.1	28.9	27.7	26.6	25.6	24.7	23.8	22.9	22.1	21.4	20.7	20.0	19.4	18.8
10.6	58.5	54.5	51.0	47.9	45.1	42.6	40.3	38.3	36.4	34.7	33.1	31.7	30.3	29.1	27.9	26.8	25.8	24.8	23.9	23.1	22.3	21.6	20.8	20.2	19.5	18.9
10.7	58.8	54.8	51.3	48.1	45.3	42.8	40.6	38.5	36.6	34.9	33.3	31.9	30.5	29.3	28.1	27.0	26.0	25.0	24.1	23.3	22.5	21.7	21.0	20.3	19.7	19.1
10.8	59.1	55.1	51.5	48.4	45.6	43.1	40.8	38.7	36.8	35.1	33.5	32.1	30.7	29.4	28.3	27.2	26.2	25.2	24.3	23.4	22.6	21.9	21.2	20.5	19.8	19.2
10.9	59.4	55.4	51.8	48.7	45.8	43.3	41.0	39.0	37.1	35.3	33.7	32.3	30.9	29.6	28.5	27.4	26.3	25.4	24.5	23.6	22.8	22.0	21.3	20.6	20.0	19.4
11.0	59.7	55.7	52.1	48.9	46.1	43.6	41.3	39.2	37.3	35.5	33.9	32.5	31.1	29.8	28.6	27.5	26.5	25.5	24.6	23.8	23.0	22.2	21.5	20.8	20.1	19.5
11.1	60.0	55.9	52.4	49.2	46.3	43.8	41.5	39.4	37.5	35.8	34.2	32.7	31.3	30.0	28.8	27.7	26.7	25.7	24.8	23.9	23.1	22.4	21.6	20.9	20.3	19.7
11.2	60.3	56.2	52.6	49.4	46.6	44.0	41.7	39.6	37.7	36.0	34.4	32.9	31.5	30.2	29.0	27.9	26.9	25.9	25.0	24.1	23.3	22.5	21.8	21.1	20.4	19.8
11.3	60.6	56.5	52.9	49.7	46.8	44.3	42.0	39.9	37.9	36.2	34.6	33.1	31.7	30.4	29.2	28.1	27.0	26.1	25.1	24.3	23.4	22.7	21.9	21.2	20.6	20.0
11.4	60.9	56.8	53.2	50.0	47.1	44.5	42.2	40.1	38.2	36.4	34.8	33.3	31.9	30.6	29.4	28.3	27.2	26.2	25.3	24.4	23.6	22.8	22.1	21.4	20.7	20.1
11.5	61.2	57.1	53.4	50.2	47.3	44.8	42.4	40.3	38.4	36.6	35.0	33.5	32.1	30.8	29.6	28.4	27.4	26.4	25.5	24.6	23.8	23.0	22.2	21.6	20.9	20.3
11.6	61.5	57.4	53.7	50.5	47.6	45.0	42.6	40.5	38.6	36.8	35.2	33.7	32.3	31.0	29.7	28.6	27.6	26.6	25.6	24.8	23.9	23.1	22.4	21.7	21.0	20.4
11.7	61.8	57.6	54.0	50.7	47.8	45.2	42.9	40.7	38.8	37.0	35.4	33.9	32.5	31.1	29.9	28.8	27.7	26.7	25.8	24.9	24.1	23.3	22.6	21.9	21.2	20.5
11.8	62.1	57.9	54.2	51.0	48.1	45.5	43.1	41.0	39.0	37.2	35.6	34.1	32.6	31.3	30.1	29.0	27.9	26.9	26.0	25.1	24.2	23.5	22.7	22.0	21.3	20.7
11.9	62.4	58.2	54.5	51.2	48.3	45.7	43.3	41.2	39.2	37.4	35.8	34.2	32.8	31.5	30.3	29.1	28.1	27.1	26.1	25.2	24.4	23.6	22.9	22.1	21.5	20.8
12.0	62.7	58.4	54.7	51.5	48.5	45.9	43.6	41.4	39.4	37.6	36.0	34.4	33.0	31.7	30.5	29.3	28.2	27.2	26.3	25.4	24.6	23.8	23.0	22.3	21.6	21.0
12.1	63.0	58.7	55.0	51.7	48.8	46.2	43.8	41.6	39.6	37.8	36.2	34.6	33.2	31.9	30.6	29.5	28.4	27.4	26.5	25.6	24.7	23.9	23.2	22.4	21.8	21.1
12.2	63.2	59.0	55.3	52.0	49.0	46.4	44.0	41.8	39.8	38.0	36.4	34.8	33.4	32.1	30.8	29.7	28.6	27.6	26.6	25.7	24.9	24.1	23.3	22.6	21.9	21.3
12.3	63.5	59.3	55.5	52.2	49.3	46.6	44.2	42.0	40.1	38.2	36.6	35.0	33.6	32.2	31.0	29.8	28.8	27.7	26.8	25.9	25.0	24.2	23.5	22.7	22.1	21.4
12.4	63.8	59.5	55.8	52.5	49.5	46.8	44.4	42.3	40.3	38.4	36.8	35.2	33.8	32.4	31.2	30.0	28.9	27.9	26.9	26.0	25.2	24.4	23.6	22.9	22.2	21.5
12.5	64.1	59.8	56.0	52.7	49.7	47.1	44.7	42.5	40.5	38.6	36.9	35.4	33.9	32.6	31.4	30.2	29.1	28.1	27.1	26.2	25.3	24.5	23.8	23.0	22.3	21.7
12.6	64.4	60.1	56.3	52.9	50.0	47.3	44.9	42.7	40.7	38.8	37.1	35.6	34.1	32.8	31.5	30.4	29.3	28.2	27.3	26.4	25.5	24.7	23.9	23.2	22.5	21.8
12.7	64.6	60.3	56.5	53.2	50.2	47.5	45.1	42.9	40.9	39.0	37.3	35.8	34.3	33.0	31.7	30.5	29.4	28.4	27.4	26.5	25.6	24.8	24.1	23.3	22.6	22.0
12.8	64.9	60.6	56.8	53.4	50.4	47.7	45.3	43.1	41.1	39.2	37.5	36.0	34.5	33.1	31.9	30.7	29.6	28.6	27.6	26.7	25.8	25.0	24.2	23.5	22.8	22.1
12.9	65.2	60.8	57.0	53.7	50.7	48.0	45.5	43.3	41.3	39.4	37.7	36.1	34.7	33.3	32.1	30.9	29.8	28.7	27.7	26.8	26.0	25.1	24.4	23.6	22.9	22.2
13.0	65.4	61.1	57.3	53.9	50.9	48.2	45.7	43.5	41.5	39.6	37.9	36.3	34.9	33.5	32.2	31.0	29.9	28.9	27.9	27.0	26.1	25.3	24.5	23.8	23.1	22.4
13.1	65.7	61.4	57.5	54.1	51.1	48.4	45.9	43.7	41.7	39.8	38.1	36.5	35.0	33.7	32.4	31.2	30.1	29.0	28.1	27.1	26.3	25.4	24.6	23.9	23.2	22.5
13.2	66.0	61.6	57.8	54.4	51.3	48.6	46.2	43.9	41.9	40.0	38.3	36.7	35.2	33.8	32.6	31.4	30.3	29.2	28.2	27.3	26.4	25.6	24.8	24.0	23.3	22.7
13.3	66.3	61.9	58.0	54.6	51.6	48.8	46.4	44.1	42.1	40.2	38.5	36.9	35.4	34.0	32.7	31.5	30.4	29.4	28.4	27.4	26.6	25.7	24.9	24.2	23.5	22.8
13.4	66.5	62.1	58.3	54.8	51.8	49.1	46.6	44.3	42.3	40.4	38.7	37.1	35.6	34.2	32.9	31.7	30.6	29.5	28.5	27.6	26.7	25.9	25.1	24.3	23.6	22.9
13.5	66.8	62.4	58.5	55.1	52.0	49.3	46.8	44.5	42.5	40.6	38.8	37.2	35.8	34.4	33.1	31.9	30.7	29.7	28.7	27.7	26.9	26.0	25.2	24.5	23.8	23.1
13.6	67.1	62.6	58.7	55.3	52.2	49.5	47.0	44.7	42.7	40.8	39.0	37.4	35.9	34.5	33.2	32.0	30.9	29.8	28.8	27.9	27.0	26.2	25.4	24.6	23.9	23.2
13.7	67.3	62.9	59.0	55.5	52.5	49.7	47.2	44.9	42.9	41.0	39.2	37.6	36.1	34.7	33.4	32.2	31.1	30.0	29.0	28.1	27.2	26.3	25.5	24.8	24.0	23.4
13.8	67.6	63.1	59.2	55.8	52.7	49.9	47.4	45.1	43.1	41.2	39.4	37.8	36.3	34.9	33.6	32.4	31.2	30.2	29.2	28.2	27.3	26.5	25.7	24.9	24.2	23.5
13.9	67.8	63.4	59.5	56.0	52.9	50.1	47.6	45.3	43.3	41.3	39.6	38.0	36.5	35.1	33.8	32.5	31.4	30.3	29.3	28.4	27.5	26.6	25.8	25.0	24.3	23.6
14.0	68.1	63.6	59.7	56.2	53.1	50.3	47.8	45.5	43.5	41.5	39.8	38.1	36.6	35.2	33.9	32.7	31.5	30.5	29.5	28.5	27.6	26.8	25.9	25.2	24.5	23.8
14.1	68.4	63.9	59.9	56.5	53.3	50.6	48.0	45.7	43.6	41.7	40.0	38.3	36.8	35.4	34.1	32.9	31.7	30.6	29.6	28.7	27.8	26.9	26.1	25.3	24.6	23.9
14.2	68.6	64.1	60.2	56.7	53.6	50.8	48.2	45.9	43.8	41.9	40.1	38.5	37.0	35.6	34.3	33.0	31.9	30.8	29.8	28.8	27.9	27.0	26.2	25.5	24.7	24.0
14.3	68.9	64.4	60.4	56.9	53.8	51.0	48.4	46.1	44.0	42.1	40.3	38.7	37.2	35.7	34.4	33.2	32.0	30.9	29.9	29.0	28.0	27.2	26.4	25.6	24.9	24.2
14.4	69.1	64.6	60.6	57.1	54.0	51.2	48.6	46.3	44.2	42.3	40.5	38.9	37.3	35.9	34.6	33.3	32.2	31.1	30.1	29.1	28.2	27.3	26.5	25.7	25.0	24.3
14.5	69.4	64.8	60.9	57.4	54.2	51.4	48.8	46.5	44.4	42.5	40.7	39.0	37.5	36.1	34.7	33.5	32.3	31.2	30.2	29.3	28.3	27.5	26.7	25.9	25.1	24.4
14.6	69.6	65.1	61.1	57.6	54.4	51.6	49.0	46.7	44.6	42.7	40.9	39.2	37.7	36.2	34.9	33.7	32.5	31.4	30.4	29.4	28.5	27.6	26.8	26.0	25.3	24.6
14.7	69.9	65.3	61.3	57.8	54.6	51.8	49.2	46.9	44.8	42.8	41.0	39.4	37.8	36.4	35.1	33.8	32.7	31.6	30.5	29.6	28.6	27.8	26.9	26.2	25.4	24.7
14.8	70.1	65.6	61.6	58.0	54.9	52.0	49.4	47.1	45.0	43.0	41.2	39.6	38.0	36.6	35.2	34.0	32.8	31.7	30.7	29.7	28.8	27.9	27.1	26.3	25.5	24.8
14.9	70.4	65.8	61.8	58.2	55.1	52.2	49.6	47.3	45.2	43.2	41.4	39.7	38.2	36.7	35.4	34.1	33.0	31.9	30.8	29.8	28.9	28.0	27.2	26.4	25.7	25.0
15.0	70.6	66.0	62.0	58.5	55.3	52.4	49.8	47.5	45.3	43.4	41.6	39.9	38.3	36.9	35.6	34.3	33.1	32.0	31.0	30.0	29.1	28.2	27.4	26.6	25.8	25.1
15.1	70.9	66.3	62.2	58.7	55.5	52.6	50.0	47.7	45.5	43.6	41.7	40.1	38.5	37.1	35.7	34.5	33.3	32.2	31.1	30.1	29.2	28.3	27.5	26.7	26.0	25.2
15.2	71.1	66.5	62.5	58.9	55.7	52.8	50.2	47.9	45.7	43.7	41.9	40.2	38.7	37.2	35.9	34.6	33.4	32.3	31.3	30.3	29.4	28.5	27.6	26.8	26.1	25.4
15.3	71.4	66.8	62.7	59.1	55.9	53.0	50.4	48.1	45.9	43.9	42.1	40.4	38.9	37.4	36.0	34.8	33.6	32.5	31.4	30.4	29.5	28.6	27.8	27.0	26.2	25.5
15.4	71.6	67.0	62.9	59.3	56.1	53.2	50.6	48.3	46.1	44.1	42.3	40.6	39.0	37.6	36.2	34.9	33.7	32.6	31.6	30.6	29.6	28.8	27.9	27.1	26.4	25.6
15.5	71.9	67.2	63.2	59.5	56.3	53.4	50.8	48.4	46.3	44.3	42.4	40.8	39.2	37.7	36.4	35.1	33.9	32.8	31.7	30.7	29.8	28.9	28.0	27.2	26.5	25.8
15.6	72.1	67.5	63.4	59.8	56.5	53.6	51.0	48.6	46.5	44.5	42.6	40.9	39.4	37.9	36.5	35.2	34.0	32.9	31.9	30.9	29.9	29.0	28.2	27.4	26.6	25.9
15.7	72.4	67.7	63.6	60.0	56.7	53.8	51.2	48.8	46.6	44.6	42.8	41.1	39.5	38.0	36.7	35.4	34.2	33.1	32.0	31.0	30.1	29.2	28.3	27.5	26.8	26.0
15.8	72.6	67.9	63.8	60.2	56.9	54.0	51.4	49.0	46.8	44.8	43.0	41.3	39.7	38.2	36.8	35.6	34.3	33.2	32.2	31.2	30.2	29.3	28.5	27.7	26.9	26.2
15.9	72.8	68.1	64.0	60.4	57.1	54.2	51.6	49.2	47.0	45.0	43.1	41.4	39.8	38.4	37.0	35.7	34.5	33.4	32.3	31.3	30.3	29.4	28.6	27.8	27.0	26.3
16.0	73.1	68.4	64.3	60.6	57.4	54.4	51.8	49.4	47.2	45.2	43.3	41.6	40.0	38.5	37.2	35.9	34.7	33.5	32.4	31.4	30.5	29.6	28.7	27.9	27.2	26.4
16.1	73.3	68.6	64.5	60.8	57.6	54.6	52.0	49.6	47.4	45.3	43.5	41.8	40.2	38.7	37.3	36.0	34.8	33.7	32.6	31.6	30.6	29.7	28.9	28.1	27.3	26.6
16.2	73.6	68.8	64.7	61.0	57.8	54.8	52.2	49.7	47.5	45.5	43.7	41.9	40.3	38.8	37.5	36.2	35.0	33.8	32.7	31.7	30.8	29.9	29.0	28.2	27.4	26.7
16.3	73.8	69.1	64.9	61.2	58.0	55.0	52.4	49.9	47.7	45.7	43.8	42.1	40.5	39.0	37.6	36.3	35.1	34.0	32.9	31.9	30.9	30.0	29.1	28.3	27.5	26.8
16.4	74.0	69.3	65.1	61.4	58.2	55.2	52.5	50.1	47.9	45.9	44.0	42.3	40.7	39.2	37.8	36.5	35.3	34.1	33.0	32.0	31.0	30.1	29.3	28.5	27.7	26.9
16.5	74.3	69.5	65.3	61.7	58.4	55.4	52.7	50.3	48.1	46.0	44.2	42.4	40.8	39.3	37.9	36.6	35.4	34.3	33.2	32.2	31.2	30.3	29.4	28.6	27.8	27.1
16.6	74.5	69.7	65.6	61.9	58.6	55.6	52.9	50.5	48.3	46.2	44.3	42.6	41.0	39.5	38.1	36.8	35.6	34.4	33.3	32.3	31.3	30.4	29.5	28.7	27.9	27.2
16.7	74.7	70.0	65.8	62.1	58.8	55.8	53.1	50.7	48.4	46.4	44.5	42.8	41.1	39.6	38.2	36.9	35.7	34.5	33.5	32.4	31.5	30.5	29.7	28.9	28.1	27.3
16.8	75.0	70.2	66.0	62.3	59.0	56.0	53.3	50.8	48.6	46.6	44.7	42.9	41.3	39.8	38.4	37.1	35.8	34.7	33.6	32.6	31.6	30.7	29.8	29.0	28.2	27.5
16.9	75.2	70.4	66.2	62.5	59.2	56.2	53.5	51.0	48.8	46.7	44.8	43.1	41.5	40.0	38.5	37.2	36.0	34.8	33.7	32.7	31.7	30.8	29.9	29.1	28.3	27.6
17.0	75.4	70.6	66.4	62.7	59.4	56.4	53.7	51.2	49.0	46.9	45.0	43.2	41.6	40.1	38.7	37.4	36.1	35.0	33.9	32.9	31.9	31.0	30.1	29.3	28.5	27.7
17.1	75.7	70.8	66.6	62.9	59.6	56.6	53.8	51.4	49.1	47.1	45.2	43.4	41.8	40.3	38.9	37.5	36.3	35.1	34.0	33.0	32.0	31.1	30.2	29.4	28.6	27.8
17.2	75.9	71.1	66.8	63.1	59.8	56.7	54.0	51.6	49.3	47.2	45.3	43.6	41.9	40.4	39.0	37.7	36.4	35.3	34.2	33.1	32.2	31.2	30.3	29.5	28.7	28.0
17.3	76.1	71.3	67.0	63.3	59.9	56.9	54.2	51.7	49.5	47.4	45.5	43.7	42.1	40.6	39.2	37.8	36.6	35.4	34.3	33.3	32.3	31.4	30.5	29.6	28.9	28.1
17.4	76.3	71.5	67.3	63.5	60.1	57.1	54.4	51.9	49.7	47.6	45.7	43.9	42.3	40.7	39.3	38.0	36.7	35.6	34.5	33.4	32.4	31.5	30.6	29.8	29.0	28.2
17.5	76.5	71.7	67.5	63.7	60.3	57.3	54.6	52.1	49.8	47.7	45.8	44.1	42.4	40.9	39.5	38.1	36.9	35.7	34.6	33.6	32.6	31.6	30.7	29.9	29.1	28.3
17.6	76.8	71.9	67.7	63.9	60.5	57.5	54.8	52.3	50.0	47.9	46.0	44.2	42.6	41.0	39.6	38.3	37.0	35.8	34.7	33.7	32.7	31.8	30.9	30.0	29.2	28.5
17.7	77.0	72.2	67.9	64.1	60.7	57.7	54.9	52.5	50.2	48.1	46.2	44.4	42.7	41.2	39.8	38.4	37.2	36.0	34.9	33.8	32.8	31.9	31.0	30.2	29.4	28.6
17.8	77.2	72.4	68.1	64.3	60.9	57.9	55.1	52.6	50.3	48.3	46.3	44.5	42.9	41.3	39.9	38.6	37.3	36.1	35.0	34.0	33.0	32.0	31.1	30.3	29.5	28.7
17.9	77.5	72.6	68.3	64.5	61.1	58.1	55.3	52.8	50.5	48.4	46.5	44.7	43.0	41.5	40.1	38.7	37.5	36.3	35.2	34.1	33.1	32.2	31.3	30.4	29.6	28.9
18.0	77.7	72.8	68.5	64.7	61.3	58.2	55.5	53.0	50.7	48.6	46.6	44.9	43.2	41.7	40.2	38.9	37.6	36.4	35.3	34.2	33.2	32.3	31.4	30.6	29.7	29.0
18.1	77.9	73.0	68.7	64.9	61.5	58.4	55.7	53.2	50.9	48.7	46.8	45.0	43.4	41.8	40.4	39.0	37.7	36.6	35.4	34.4	33.4	32.4	31.5	30.7	29.9	29.1
18.2	78.1	73.2	68.9	65.1	61.7	58.6	55.8	53.3	51.0	48.9	47.0	45.2	43.5	42.0	40.5	39.2	37.9	36.7	35.6	34.5	33.5	32.6	31.7	30.8	30.0	29.2
18.3	78.4	73.4	69.1	65.3	61.9	58.8	56.0	53.5	51.2	49.1	47.1	45.3	43.7	42.1	40.7	39.3	38.0	36.8	35.7	34.6	33.6	32.7	31.8	30.9	30.1	29.4
18.4	78.6	73.7	69.3	65.5	62.1	59.0	56.2	53.7	51.4	49.2	47.3	45.5	43.8	42.3	40.8	39.4	38.2	37.0	35.8	34.8	33.8	32.8	31.9	31.1	30.3	29.5
18.5	78.8	73.9	69.5	65.7	62.2	59.2	56.4	53.8	51.5	49.4	47.5	45.6	44.0	42.4	41.0	39.6	38.3	37.1	36.0	34.9	33.9	33.0	32.1	31.2	30.4	29.6
18.6	79.0	74.1	69.7	65.9	62.4	59.3	56.6	54.0	51.7	49.6	47.6	45.8	44.1	42.6	41.1	39.7	38.5	37.3	36.1	35.1	34.0	33.1	32.2	31.3	30.5	29.7
18.7	79.2	74.3	69.9	66.1	62.6	59.5	56.7	54.2	51.9	49.7	47.8	46.0	44.3	42.7	41.2	39.9	38.6	37.4	36.3	35.2	34.2	33.2	32.3	31.5	30.6	29.9
18.8	79.5	74.5	70.1	66.3	62.8	59.7	56.9	54.4	52.0	49.9	47.9	46.1	44.4	42.9	41.4	40.0	38.7	37.5	36.4	35.3	34.3	33.4	32.4	31.6	30.8	30.0
18.9	79.7	74.7	70.3	66.5	63.0	59.9	57.1	54.5	52.2	50.1	48.1	46.3	44.6	43.0	41.5	40.2	38.9	37.7	36.5	35.5	34.4	33.5	32.6	31.7	30.9	30.1

*Height = total tree height.

Table A7. White spruce site index prediction table at young ages in subregion 11.

Height	Ring count at 1.3 m above ground																									
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
1.5	7.3	6.3	5.5	4.9	4.5	4.1	3.7	3.5	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8
1.6	9.6	8.3	7.3	6.5	5.9	5.3	4.9	4.5	4.2	3.9	3.6	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1
1.7	11.6	10.1	8.9	8.0	7.2	6.5	5.9	5.4	5.0	4.7	4.4	4.1	3.9	3.6	3.5	3.3	3.2	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3
1.8	13.3	11.7	10.4	9.3	8.3	7.6	6.9	6.3	5.8	5.4	5.1	4.7	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.1	2.9	2.8	2.8	2.7	2.6
1.9	14.9	13.1	11.7	10.5	9.5	8.6	7.8	7.2	6.6	6.1	5.7	5.4	5.0	4.7	4.5	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.9
2.0	16.3	14.5	12.9	11.6	10.5	9.5	8.7	8.0	7.4	6.8	6.4	6.0	5.6	5.3	5.0	4.7	4.5	4.2	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.1
2.1	17.6	15.7	14.0	12.6	11.5	10.4	9.5	8.8	8.1	7.5	7.0	6.5	6.1	5.8	5.4	5.1	4.9	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4
2.2	18.8	16.8	15.1	13.6	12.4	11.3	10.3	9.5	8.8	8.2	7.6	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6
2.3	20.0	17.8	16.1	14.5	13.2	12.1	11.1	10.2	9.5	8.8	8.2	7.6	7.2	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.9
2.4	21.0	18.8	17.0	15.4	14.0	12.9	11.8	10.9	10.1	9.4	8.7	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1
2.5	22.0	19.8	17.9	16.2	14.8	13.6	12.5	11.5	10.7	10.0	9.3	8.7	8.1	7.7	7.2	6.8	6.5	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.3
2.6	23.0	20.6	18.7	17.0	15.6	14.3	13.2	12.2	11.3	10.5	9.8	9.2	8.6	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	4.9	4.8	4.6
2.7	23.9	21.5	19.5	17.8	16.3	14.9	13.8	12.8	11.9	11.0	10.3	9.7	9.1	8.5	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.4	5.2	5.0	4.8
2.8	24.7	22.3	20.2	18.5	16.9	15.6	14.4	13.3	12.4	11.6	10.8	10.1	9.5	9.0	8.5	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1
2.9	25.5	23.1	21.0	19.2	17.6	16.2	15.0	13.9	12.9	12.1	11.3	10.6	10.0	9.4	8.9	8.4	7.9	7.5	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3
3.0	26.3	23.8	21.7	19.8	18.2	16.8	15.6	14.5	13.5	12.6	11.8	11.0	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.1	6.8	6.5	6.2	6.0	5.7	5.5
3.1	27.1	24.5	22.3	20.5	18.8	17.4	16.1	15.0	14.0	13.0	12.2	11.5	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.2	6.0	5.7
3.2	27.8	25.2	23.0	21.1	19.4	17.9	16.6	15.5	14.4	13.5	12.7	11.9	11.2	10.6	10.0	9.5	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.2	6.0
3.3	28.5	25.9	23.6	21.7	20.0	18.5	17.2	16.0	14.9	14.0	13.1	12.3	11.6	10.9	10.3	9.8	9.3	8.8	8.4	8.0	7.7	7.3	7.0	6.7	6.4	6.2
3.4	29.2	26.5	24.2	22.3	20.5	19.0	17.7	16.5	15.4	14.4	13.5	12.7	12.0	11.3	10.7	10.1	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.7	6.4
3.5	29.9	27.1	24.8	22.8	21.1	19.5	18.1	16.9	15.8	14.8	13.9	13.1	12.4	11.7	11.0	10.5	9.9	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.6
3.6	30.5	27.7	25.4	23.4	21.6	20.0	18.6	17.4	16.3	15.2	14.3	13.5	12.7	12.0	11.4	10.8	10.3	9.8	9.3	8.9	8.5	8.1	7.8	7.4	7.1	6.9
3.7	31.1	28.3	25.9	23.9	22.1	20.5	19.1	17.8	16.7	15.7	14.7	13.9	13.1	12.4	11.7	11.1	10.6	10.1	9.6	9.1	8.7	8.4	8.0	7.7	7.4	7.1
3.8	31.7	28.9	26.5	24.4	22.6	21.0	19.5	18.3	17.1	16.1	15.1	14.2	13.5	12.7	12.1	11.4	10.9	10.3	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3
3.9	32.3	29.5	27.0	24.9	23.1	21.4	20.0	18.7	17.5	16.5	15.5	14.6	13.8	13.1	12.4	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.5	8.1	7.8	7.5
4.0	32.9	30.0	27.5	25.4	23.5	21.9	20.4	19.1	17.9	16.8	15.9	15.0	14.1	13.4	12.7	12.1	11.5	10.9	10.4	9.9	9.5	9.1	8.7	8.4	8.0	7.7
4.1	33.5	30.5	28.0	25.9	24.0	22.3	20.8	19.5	18.3	17.2	16.2	15.3	14.5	13.7	13.0	12.4	11.8	11.2	10.7	10.2	9.8	9.3	9.0	8.6	8.3	7.9
4.2	34.0	31.0	28.5	26.3	24.4	22.7	21.2	19.9	18.7	17.6	16.6	15.7	14.8	14.0	13.3	12.7	12.0	11.5	11.0	10.5	10.0	9.6	9.2	8.8	8.5	8.1
4.3	34.5	31.6	29.0	26.8	24.9	23.2	21.7	20.3	19.1	17.9	16.9	16.0	15.1	14.3	13.6	13.0	12.3	11.8	11.2	10.7	10.3	9.8	9.4	9.0	8.7	8.3
4.4	35.1	32.1	29.5	27.3	25.3	23.6	22.0	20.7	19.4	18.3	17.3	16.3	15.5	14.7	13.9	13.2	12.6	12.0	11.5	11.0	10.5	10.1	9.6	9.3	8.9	8.6
4.5	35.6	32.5	29.9	27.7	25.7	24.0	22.4	21.0	19.8	18.6	17.6	16.6	15.8	15.0	14.2	13.5	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.1	8.8
4.6	36.1	33.0	30.4	28.1	26.1	24.4	22.8	21.4	20.1	19.0	17.9	17.0	16.1	15.3	14.5	13.8	13.2	12.6	12.0	11.5	11.0	10.5	10.1	9.7	9.3	9.0
4.7	36.6	33.5	30.8	28.5	26.5	24.8	23.2	21.8	20.5	19.3	18.3	17.3	16.4	15.6	14.8	14.1	13.4	12.8	12.2	11.7	11.2	10.7	10.3	9.9	9.5	9.2
4.8	37.1	33.9	31.3	29.0	26.9	25.2	23.6	22.1	20.8	19.7	18.6	17.6	16.7	15.8	15.1	14.4	13.7	13.1	12.5	11.9	11.4	11.0	10.5	10.1	9.7	9.4
4.9	37.5	34.4	31.7	29.4	27.3	25.5	23.9	22.5	21.2	20.0	18.9	17.9	17.0	16.1	15.4	14.6	13.9	13.3	12.7	12.2	11.7	11.2	10.7	10.3	9.9	9.6
5.0	38.0	34.8	32.1	29.8	27.7	25.9	24.3	22.8	21.5	20.3	19.2	18.2	17.3	16.4	15.6	14.9	14.2	13.6	13.0	12.4	11.9	11.4	11.0	10.5	10.1	9.7
5.1	38.5	35.3	32.5	30.2	28.1	26.3	24.6	23.2	21.8	20.6	19.5	18.5	17.6	16.7	15.9	15.2	14.5	13.8	13.2	12.7	12.1	11.6	11.2	10.7	10.3	9.9
5.2	38.9	35.7	32.9	30.6	28.5	26.6	25.0	23.5	22.1	20.9	19.8	18.8	17.8	17.0	16.2	15.4	14.7	14.1	13.5	12.9	12.4	11.9	11.4	10.9	10.5	10.1
5.3	39.4	36.1	33.3	30.9	28.8	27.0	25.3	23.8	22.5	21.2	20.1	19.1	18.1	17.2	16.4	15.7	15.0	14.3	13.7	13.1	12.6	12.1	11.6	11.1	10.7	10.3
5.4	39.8	36.5	33.7	31.3	29.2	27.3	25.6	24.1	22.8	21.5	20.4	19.4	18.4	17.5	16.7	15.9	15.2	14.5	13.9	13.3	12.8	12.3	11.8	11.3	10.9	10.5
5.5	40.2	36.9	34.1	31.7	29.5	27.7	26.0	24.5	23.1	21.8	20.7	19.6	18.7	17.8	16.9	16.2	15.4	14.8	14.1	13.6	13.0	12.5	12.0	11.5	11.1	10.7
5.6	40.7	37.3	34.5	32.0	29.9	28.0	26.3	24.8	23.4	22.1	21.0	19.9	18.9	18.0	17.2	16.4	15.7	15.0	14.4	13.8	13.2	12.7	12.2	11.7	11.3	10.9
5.7	41.1	37.7	34.9	32.4	30.2	28.3	26.6	25.1	23.7	22.4	21.3	20.2	19.2	18.3	17.4	16.7	15.9	15.2	14.6	14.0	13.4	12.9	12.4	11.9	11.5	11.1
5.8	41.5	38.1	35.2	32.8	30.6	28.7	26.9	25.4	24.0	22.7	21.5	20.5	19.5	18.5	17.7	16.9	16.2	15.5	14.8	14.2	13.6	13.1	12.6	12.1	11.7	11.3
5.9	41.9	38.5	35.6	33.1	30.9	29.0	27.2	25.7	24.3	23.0	21.8	20.7	19.7	18.8	17.9	17.1	16.4	15.7	15.0	14.4	13.9	13.3	12.8	12.3	11.9	11.4
6.0	42.3	38.9	36.0	33.5	31.2	29.3	27.5	26.0	24.6	23.3	22.1	21.0	20.0	19.0	18.2	17.4	16.6	15.9	15.3	14.6	14.1	13.5	13.0	12.5	12.1	11.6
6.1	42.7	39.3	36.3	33.8	31.6	29.6	27.9	26.3	24.8	23.5	22.3	21.2	20.2	19.3	18.4	17.6	16.8	16.1	15.5	14.9	14.3	13.7	13.2	12.7	12.2	11.8
6.2	43.1	39.6	36.7	34.1	31.9	29.9	28.2	26.6	25.1	23.8	22.6	21.5	20.5	19.5	18.7	17.8	17.1	16.4	15.7	15.1	14.5	13.9	13.4	12.9	12.4	12.0
6.3	43.5	40.0	37.0	34.5	32.2	30.2	28.4	26.8	25.4	24.1	22.9	21.8	20.7	19.8	18.9	18.1	17.3	16.6	15.9	15.3	14.7	14.1	13.6	13.1	12.6	12.2
6.4	43.9	40.4	37.4	34.8	32.5	30.5	28.7	27.1	25.7	24.3	23.1	22.0	21.0	20.0	19.1	18.3	17.5	16.8	16.1	15.5	14.9	14.3	13.8	13.3	12.8	12.3
6.5	44.2	40.7	37.7	35.1	32.8	30.8	29.0	27.4	25.9	24.6	23.4	22.3	21.2	20.2	19.4	18.5	17.7	17.0	16.3	15.7	15.1	14.5	14.0	13.5	13.0	12.5
6.6	44.6	41.1	38.0	35.4	33.1	31.1	29.3	27.7	26.2	24.9	23.6	22.5	21.5	20.5	19.6	18.7	18.0	17.2	16.5	15.9	15.3	14.7	14.1	13.6	13.1	12.7
6.7	45.0	41.4	38.4	35.8	33.5	31.4	29.6	28.0	26.5	25.1	23.9	22.7	21.7	20.7	19.8	19.0	18.2	17.4	16.7	16.1	15.5	14.9	14.3	13.8	13.3	12.9
6.8	45.3	41.8	38.7	36.1	33.8	31.7	29.9	28.2	26.7	25.4	24.1	23.0	21.9	20.9	20.0	19.2	18.4	17.6	16.9	16.3	15.7	15.1	14.5	14.0	13.5	13.0
6.9	45.7	42.1	39.0	36.4	34.0	32.0	30.2	28.5	27.0	25.6	24.4	23.2	22.2	21.2	20.3	19.4	18.6	17.8	17.1	16.5	15.8	15.3	14.7	14.2	13.7	13.2
7.0	46.1	42.4	39.3	36.7	34.3	32.3	30.4	28.8	27.3	25.9	24.6	23.5	22.4	21.4	20.5	19.6	18.8	18.0	17.3	16.7	16.0	15.4	14.9	14.4	13.9	13.4
7.1	46.4	42.8	39.7	37.0	34.6	32.6	30.7	29.0	27.5	26.1	24.9	23.7	22.6	21.6	20.7	19.8	19.0	18.2	17.5	16.9	16.2	15.6	15.1	14.5	14.0	13.5
7.2	46.8	43.1	40.0	37.3	34.9	32.8	31.0	29.3	27.8	26.4	25.1	23.9	22.8	21.8	20.9	20.0	19.2	18.4	17.7	17.1	16.4	15.8	15.2	14.7	14.2	13.7
7.3	47.1	43.4	40.3	37.6	35.2	33.1	31.2	29.5	28.0	26.6	25.3	24.2	23.1	22.1	21.1	20.2	19.4	18.6	17.9	17.2	16.6	16.0	15.4	14.9	14.4	13.9
7.4	47.4	43.7	40.6	37.9	35.5	33.4	31.5	29.8	28.3	26.9	25.6	24.4	23.3	22.3	21.3	20.4	19.6	18.8	18.1	17.4	16.8	16.2	15.6	15.1	14.5	14.0
7.5	47.8	44.1	40.9	38.2	35.8	33.6	31.8	30.0	28.5	27.1	25.8	24.6	23.5	22.5	21.5	20.6	19.8	19.0	18.3	17.6	17.0	16.4	15.8	15.2	14.7	14.2
7.6	48.1	44.4	41.2	38.4	36.0	33.9	32.0	30.3	28.7	27.3	26.0	24.8	23.7	22.7	21.7	20.9	20.0	19.2	18.5	17.8	17.2	16.5	16.0	15.4	14.9	14.4
7.7	48.4	44.7	41.5	38.7	36.3	34.2	32.3	30.5	29.0	27.6	26.3	25.1	23.9	22.9	22.0	21.1	20.2	19.4	18.7	18.0	17.3	16.7	16.1	15.6	15.0	14.5
7.8	48.8	45.0	41.8	39.0	36.6	34.4	32.5	30.8	29.2	27.8	26.5	25.3	24.2	23.1	22.2	21.3	20.4	19.6	18.9	18.2	17.5	16.9	16.3	15.7	15.2	14.7
7.9	49.1	45.3	42.1	39.3	36.9	34.7	32.8	31.0	29.5	28.0	26.7	25.5	24.4	23.3	22.4	21.5	20.6	19.8	19.1	18.4	17.7	17.1	16.5	15.9	15.4	14.9
8.0	49.4	45.6	42.4	39.6	37.1	35.0	33.0	31.3	29.7	28.2	26.9	25.7	24.6	23.5	22.6	21.7	20.8	20.0	19.2	18.5	17.9	17.2	16.6	16.1	15.5	15.0
8.1	49.7	45.9	42.7	39.8	37.4	35.2	33.3	31.5	29.9	28.5	27.1	25.9	24.8	23.7	22.8	21.8	21.0	20.2	19.4	18.7	18.0	17.4	16.8	16.2	15.7	15.2
8.2	50.0	46.2	42.9	40.1	37.6	35.5	33.5	31.7	30.2	28.7	27.4	26.1	25.0	23.9	23.0	22.0	21.2	20.4	19.6	18.9	18.2	17.6	17.0	16.4	15.9	15.3
8.3	50.4	46.5	43.2	40.4	37.9	35.7	33.7	32.0	30.4	28.9	27.6	26.3	25.2	24.1	23.2	22.2	21.4	20.6	19.8	19.1	18.4	17.8	17.1	16.6	16.0	15.5
8.4	50.7	46.8	43.5	40.7	38.2	36.0	34.0	32.2	30.6	29.1	27.8	26.6	25.4	24.3	23.4	22.4	21.6	20.7	20.0	19.3	18.6	17.9	17.3	16.7	16.2	15.7
8.5	51.0	47.1	43.8	40.9	38.4	36.2	34.2	32.4	30.8	29.4	28.0	26.8	25.6	24.5	23.5	22.6	21.7	20.9	20.2	19.4	18.7	18.1	17.5	16.9	16.3	15.8
8.6	51.3	47.4	44.1	41.2	38.7	36.5	34.5	32.7	31.1	29.6	28.2	27.0	25.8	24.7	23.7	22.8	21.9	21.1	20.3	19.6	18.9	18.3	17.6	17.1	16.5	16.0
8.7	51.6	47.7	44.3	41.4	38.9	36.7	34.7	32.9	31.3	29.8	28.4	27.2	26.0	24.9	23.9	23.0	22.1	21.3	20.5	19.8	19.1	18.4	17.8	17.2	16.7	16.1
8.8	51.9	47.9	44.6	41.7	39.2	36.9	34.9	33.1	31.5	30.0	28.6	27.4	26.2	25.1	24.1	23.2	22.3	21.5	20.7	19.9	19.3	18.6	18.0	17.4	16.8	16.3
8.9	52.2	48.2	44.9	42.0	39.4	37.2	35.2	33.4	31.7	30.2	28.8	27.6	26.4	25.3	24.3	23.4	22.5	21.6	20.9	20.1	19.4	18.8	18.1	17.5	17.0	16.4
9.0	52.5	48.5	45.1	42.2	39.7	37.4	35.4	33.6	31.9	30.4	29.0	27.8	26.6	25.5	24.5	23.5	22.7	21.8	21.0	20.3	19.6	18.9	18.3	17.7	17.1	16.6
9.1	52.8	48.8	45.4	42.5	39.9	37.6	35.6	33.8	32.1	30.6	29.3	28.0	26.8	25.7	24.7	23.7	22.8	22.0	21.2	20.5	19.8	19.1	18.5	17.9	17.3	16.7
9.2	53.1	49.1	45.7	42.7	40.2	37.9	35.8	34.0	32.4	30.8	29.5	28.2	27.0	25.9	24.9	23.9	23.0	22.2	21.4	20.6	19.9	19.2	18.6	18.0	17.4	16.9
9.3	53.3	49.3	45.9	43.0	40.4	38.1	36.1	34.2	32.6	31.0	29.7	28.4	27.2	26.1	25.1	24.1	23.2	22.3	21.5	20.8	20.1	19.4	18.8	18.2	17.6	17.0
9.4	53.6	49.6	46.2	43.2	40.6	38.3	36.3	34.4	32.8	31.3	29.9	28.6	27.4	26.3	25.2	24.3	23.4	22.5	21.7	21.0	20.2	19.6	18.9	18.3	17.7	17.2
9.5	53.9	49.9	46.4	43.5	40.9	38.6	36.5	34.7	33.0	31.5	30.1	28.8	27.6	26.5	25.4	24.4	23.5	22.7	21.9	21.1	20.4	19.7	19.1	18.5	17.9	17.3
9.6	54.2	50.1	46.7	43.7	41.1	38.8	36.7	34.9	33.2	31.7	30.2	29.0	27.8	26.6	25.6	24.6	23.7	22.9	22.1	21.3	20.6	19.9	19.2	18.6	18.0	17.5
9.7	54.5	50.4	46.9	44.0	41.3	39.0	37.0	35.1	33.4	31.9	30.4	29.1	27.9	26.8	25.8	24.8	23.9	23.0	22.2	21.5	20.7	20.0	19.4	18.8	18.2	17.6
9.8	54.8	50.7	47.2	44.2	41.6	39.2	37.2	35.3	33.6	32.1	30.6	29.3	28.1	27.0	26.0	25.0	24.1	23.2	22.4	21.6	20.9	20.2	19.6	18.9	18.3	17.8
9.9	55.0	50.9	47.4	44.4	41.8	39.5	37.4	35.5	33.8	32.3	30.8	29.5	28.3	27.2	26.1	25.1	24.2	23.4	22.5	21.8	21.0	20.4	19.7	19.1	18.5	17.9
10.0	55.3	51.2	47.7	44.7	42.0	39.7	37.6	35.7	34.0	32.5	31.0	29.7	28.5	27.4	26.3	25.3	24.4	23.5	22.7	21.9	21.2	20.5	19.9	19.2	18.6	18.1
10.1	55.6	51.5	47.9	44.9	42.3	39.9	37.8	35.9	34.2	32.6	31.2	29.9	28.7	27.5	26.5	25.5	24.6	23.7	22.9	22.1	21.4	20.7	20.0	19.4	18.8	18.2
10.2	55.9	51.7	48.2	45.1	42.5	40.1	38.0	36.1	34.4	32.8	31.4	30.1	28.9	27.7	26.7	25.7	24.7	23.9	23.0	22.3	21.5	20.8	20.2	19.5	18.9	18.4

*Height = total tree height.

Table A7. White spruce site index prediction table at young ages in subregion 11 (continued).

Height	Ring count at 1.3 m above ground																									
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
10.3	56.1	52.0	48.4	45.4	42.7	40.3	38.2	36.3	34.6	33.0	31.6	30.3	29.0	27.9	26.8	25.8	24.9	24.0	23.2	22.4	21.7	21.0	20.3	19.7	19.1	18.5
10.4	56.4	52.2	48.7	45.6	42.9	40.6	38.4	36.5	34.8	33.2	31.8	30.4	29.2	28.1	27.0	26.0	25.1	24.2	23.4	22.6	21.8	21.1	20.5	19.8	19.2	18.6
10.5	56.7	52.5	48.9	45.8	43.2	40.8	38.6	36.7	35.0	33.4	32.0	30.6	29.4	28.2	27.2	26.2	25.2	24.3	23.5	22.7	22.0	21.3	20.6	20.0	19.4	18.8
10.6	56.9	52.7	49.2	46.1	43.4	41.0	38.9	36.9	35.2	33.6	32.2	30.8	29.6	28.4	27.3	26.3	25.4	24.5	23.7	22.9	22.1	21.4	20.8	20.1	19.5	18.9
10.7	57.2	53.0	49.4	46.3	43.6	41.2	39.1	37.1	35.4	33.8	32.3	31.0	29.7	28.6	27.5	26.5	25.6	24.7	23.8	23.0	22.3	21.6	20.9	20.3	19.7	19.1
10.8	57.4	53.2	49.6	46.5	43.8	41.4	39.3	37.3	35.6	34.0	32.5	31.2	29.9	28.8	27.7	26.7	25.7	24.8	24.0	23.2	22.4	21.7	21.1	20.4	19.8	19.2
10.9	57.7	53.5	49.9	46.7	44.0	41.6	39.5	37.5	35.8	34.2	32.7	31.4	30.1	28.9	27.9	26.8	25.9	25.0	24.1	23.4	22.6	21.9	21.2	20.6	19.9	19.4
11.0	58.0	53.7	50.1	47.0	44.2	41.8	39.7	37.7	36.0	34.4	32.9	31.5	30.3	29.1	28.0	27.0	26.0	25.1	24.3	23.5	22.7	22.0	21.4	20.7	20.1	19.5
11.1	58.2	53.9	50.3	47.2	44.5	42.0	39.9	37.9	36.2	34.5	33.1	31.7	30.4	29.3	28.2	27.2	26.2	25.3	24.5	23.7	22.9	22.2	21.5	20.8	20.2	19.6
11.2	58.5	54.2	50.6	47.4	44.7	42.2	40.1	38.1	36.3	34.7	33.2	31.9	30.6	29.4	28.3	27.3	26.4	25.5	24.6	23.8	23.0	22.3	21.6	21.0	20.4	19.8
11.3	58.7	54.4	50.8	47.6	44.9	42.4	40.3	38.3	36.5	34.9	33.4	32.1	30.8	29.6	28.5	27.5	26.5	25.6	24.8	24.0	23.2	22.5	21.8	21.1	20.5	19.9
11.4	59.0	54.7	51.0	47.9	45.1	42.6	40.5	38.5	36.7	35.1	33.6	32.2	31.0	29.8	28.7	27.6	26.7	25.8	24.9	24.1	23.3	22.6	21.9	21.3	20.6	20.1
11.5	59.2	54.9	51.2	48.1	45.3	42.8	40.7	38.7	36.9	35.3	33.8	32.4	31.1	29.9	28.8	27.8	26.8	25.9	25.1	24.3	23.5	22.8	22.1	21.4	20.8	20.2
11.6	59.5	55.1	51.5	48.3	45.5	43.0	40.9	38.9	37.1	35.5	34.0	32.6	31.3	30.1	29.0	28.0	27.0	26.1	25.2	24.4	23.6	22.9	22.2	21.6	20.9	20.3
11.7	59.7	55.4	51.7	48.5	45.7	43.2	41.0	39.1	37.3	35.6	34.1	32.7	31.5	30.3	29.2	28.1	27.2	26.2	25.4	24.6	23.8	23.1	22.4	21.7	21.1	20.5
11.8	60.0	55.6	51.9	48.7	45.9	43.4	41.2	39.3	37.5	35.8	34.3	32.9	31.6	30.4	29.3	28.3	27.3	26.4	25.5	24.7	23.9	23.2	22.5	21.8	21.2	20.6
11.9	60.2	55.8	52.1	48.9	46.1	43.6	41.4	39.4	37.6	36.0	34.5	33.1	31.8	30.6	29.5	28.4	27.5	26.5	25.7	24.9	24.1	23.3	22.6	22.0	21.3	20.7
12.0	60.4	56.1	52.4	49.1	46.3	43.8	41.6	39.6	37.8	36.2	34.6	33.3	32.0	30.8	29.6	28.6	27.6	26.7	25.8	25.0	24.2	23.5	22.8	22.1	21.5	20.9
12.1	60.7	56.3	52.6	49.3	46.5	44.0	41.8	39.8	38.0	36.3	34.8	33.4	32.1	30.9	29.8	28.8	27.8	26.8	26.0	25.1	24.4	23.6	22.9	22.3	21.6	21.0
12.2	60.9	56.5	52.8	49.6	46.7	44.2	42.0	40.0	38.2	36.5	35.0	33.6	32.3	31.1	30.0	28.9	27.9	27.0	26.1	25.3	24.5	23.8	23.1	22.4	21.7	21.1
12.3	61.2	56.8	53.0	49.8	46.9	44.4	42.2	40.2	38.4	36.7	35.2	33.8	32.5	31.2	30.1	29.1	28.1	27.1	26.3	25.4	24.7	23.9	23.2	22.5	21.9	21.3
12.4	61.4	57.0	53.2	50.0	47.1	44.6	42.4	40.4	38.5	36.9	35.3	33.9	32.6	31.4	30.3	29.2	28.2	27.3	26.4	25.6	24.8	24.0	23.3	22.7	22.0	21.4
12.5	61.6	57.2	53.4	50.2	47.3	44.8	42.6	40.5	38.7	37.0	35.5	34.1	32.8	31.6	30.4	29.4	28.4	27.4	26.6	25.7	24.9	24.2	23.5	22.8	22.2	21.5
12.6	61.9	57.4	53.6	50.4	47.5	45.0	42.7	40.7	38.9	37.2	35.7	34.2	32.9	31.7	30.6	29.5	28.5	27.6	26.7	25.9	25.1	24.3	23.6	22.9	22.3	21.7
12.7	62.1	57.7	53.9	50.6	47.7	45.2	42.9	40.9	39.1	37.4	35.8	34.4	33.1	31.9	30.7	29.7	28.7	27.7	26.9	26.0	25.2	24.5	23.8	23.1	22.4	21.8
12.8	62.3	57.9	54.1	50.8	47.9	45.4	43.1	41.1	39.2	37.5	36.0	34.6	33.3	32.0	30.9	29.8	28.8	27.9	27.0	26.2	25.4	24.6	23.9	23.2	22.6	21.9
12.9	62.6	58.1	54.3	51.0	48.1	45.6	43.3	41.3	39.4	37.7	36.2	34.7	33.4	32.2	31.0	30.0	29.0	28.0	27.1	26.3	25.5	24.7	24.0	23.3	22.7	22.1
13.0	62.8	58.3	54.5	51.2	48.3	45.8	43.5	41.4	39.6	37.9	36.3	34.9	33.6	32.3	31.2	30.1	29.1	28.2	27.3	26.4	25.6	24.9	24.2	23.5	22.8	22.2
13.1	63.0	58.5	54.7	51.4	48.5	45.9	43.7	41.6	39.7	38.0	36.5	35.1	33.7	32.5	31.4	30.3	29.3	28.3	27.4	26.6	25.8	25.0	24.3	23.6	23.0	22.3
13.2	63.3	58.7	54.9	51.6	48.7	46.1	43.8	41.8	39.9	38.2	36.7	35.2	33.9	32.7	31.5	30.4	29.4	28.5	27.6	26.7	25.9	25.2	24.4	23.7	23.1	22.5
13.3	63.5	59.0	55.1	51.8	48.9	46.3	44.0	42.0	40.1	38.4	36.8	35.4	34.0	32.8	31.7	30.6	29.6	28.6	27.7	26.9	26.1	25.3	24.6	23.9	23.2	22.6
13.4	63.7	59.2	55.3	52.0	49.1	46.5	44.2	42.1	40.3	38.5	37.0	35.5	34.2	33.0	31.8	30.7	29.7	28.8	27.9	27.0	26.2	25.4	24.7	24.0	23.3	22.7
13.5	64.0	59.4	55.5	52.2	49.3	46.7	44.4	42.3	40.4	38.7	37.1	35.7	34.4	33.1	32.0	30.9	29.9	28.9	28.0	27.1	26.3	25.6	24.8	24.1	23.5	22.8
13.6	64.2	59.6	55.7	52.4	49.5	46.9	44.6	42.5	40.6	38.9	37.3	35.9	34.5	33.3	32.1	31.0	30.0	29.0	28.1	27.3	26.5	25.7	25.0	24.3	23.6	23.0
13.7	64.4	59.8	55.9	52.6	49.6	47.0	44.7	42.7	40.8	39.0	37.5	36.0	34.7	33.4	32.3	31.2	30.1	29.2	28.3	27.4	26.6	25.8	25.1	24.4	23.7	23.1
13.8	64.6	60.0	56.1	52.8	49.8	47.2	44.9	42.8	40.9	39.2	37.6	36.2	34.8	33.6	32.4	31.3	30.3	29.3	28.4	27.6	26.7	26.0	25.2	24.5	23.9	23.2
13.9	64.8	60.2	56.3	53.0	50.0	47.4	45.1	43.0	41.1	39.4	37.8	36.3	35.0	33.7	32.5	31.5	30.4	29.5	28.6	27.7	26.9	26.1	25.4	24.7	24.0	23.4
14.0	65.1	60.5	56.5	53.2	50.2	47.6	45.3	43.2	41.3	39.5	37.9	36.5	35.1	33.9	32.7	31.6	30.6	29.6	28.7	27.8	27.0	26.2	25.5	24.8	24.1	23.5
14.1	65.3	60.7	56.7	53.3	50.4	47.8	45.4	43.3	41.4	39.7	38.1	36.6	35.3	34.0	32.8	31.7	30.7	29.7	28.8	28.0	27.1	26.4	25.6	24.9	24.3	23.6
14.2	65.5	60.9	56.9	53.5	50.6	47.9	45.6	43.5	41.6	39.9	38.3	36.8	35.4	34.2	33.0	31.9	30.9	29.9	29.0	28.1	27.3	26.5	25.8	25.1	24.4	23.7
14.3	65.7	61.1	57.1	53.7	50.8	48.1	45.8	43.7	41.8	40.0	38.4	36.9	35.6	34.3	33.1	32.0	31.0	30.0	29.1	28.2	27.4	26.6	25.9	25.2	24.5	23.9
14.4	65.9	61.3	57.3	53.9	50.9	48.3	45.9	43.8	41.9	40.2	38.6	37.1	35.7	34.5	33.3	32.2	31.1	30.2	29.2	28.4	27.5	26.8	26.0	25.3	24.6	24.0
14.5	66.2	61.5	57.5	54.1	51.1	48.5	46.1	44.0	42.1	40.3	38.7	37.2	35.9	34.6	33.4	32.3	31.3	30.3	29.4	28.5	27.7	26.9	26.1	25.4	24.8	24.1
14.6	66.4	61.7	57.7	54.3	51.3	48.7	46.3	44.2	42.2	40.5	38.9	37.4	36.0	34.8	33.6	32.5	31.4	30.4	29.5	28.6	27.8	27.0	26.3	25.6	24.9	24.2
14.7	66.6	61.9	57.9	54.5	51.5	48.8	46.5	44.3	42.4	40.6	39.0	37.5	36.2	34.9	33.7	32.6	31.6	30.6	29.6	28.8	27.9	27.2	26.4	25.7	25.0	24.4
14.8	66.8	62.1	58.1	54.7	51.7	49.0	46.6	44.5	42.6	40.8	39.2	37.7	36.3	35.0	33.9	32.7	31.7	30.7	29.8	28.9	28.1	27.3	26.5	25.8	25.1	24.5
14.9	67.0	62.3	58.3	54.9	51.8	49.2	46.8	44.7	42.7	41.0	39.3	37.8	36.5	35.2	34.0	32.9	31.8	30.8	29.9	29.0	28.2	27.4	26.7	25.9	25.3	24.6
15.0	67.2	62.5	58.5	55.0	52.0	49.3	47.0	44.8	42.9	41.1	39.5	38.0	36.6	35.3	34.1	33.0	32.0	31.0	30.0	29.2	28.3	27.5	26.8	26.1	25.4	24.7
15.1	67.4	62.7	58.7	55.2	52.2	49.5	47.1	45.0	43.0	41.3	39.6	38.1	36.8	35.5	34.3	33.2	32.1	31.1	30.2	29.3	28.5	27.7	26.9	26.2	25.5	24.9
15.2	67.6	62.9	58.9	55.4	52.4	49.7	47.3	45.1	43.2	41.4	39.8	38.3	36.9	35.6	34.4	33.3	32.2	31.3	30.3	29.4	28.6	27.8	27.0	26.3	25.6	25.0
15.3	67.8	63.1	59.1	55.6	52.5	49.9	47.5	45.3	43.4	41.6	39.9	38.4	37.1	35.8	34.6	33.4	32.4	31.4	30.4	29.6	28.7	27.9	27.2	26.5	25.8	25.1
15.4	68.1	63.3	59.3	55.8	52.7	50.0	47.6	45.5	43.5	41.7	40.1	38.6	37.2	35.9	34.7	33.6	32.5	31.5	30.6	29.7	28.9	28.1	27.3	26.6	25.9	25.2
15.5	68.3	63.5	59.4	56.0	52.9	50.2	47.8	45.6	43.7	41.9	40.2	38.7	37.3	36.0	34.8	33.7	32.7	31.7	30.7	29.8	29.0	28.2	27.4	26.7	26.0	25.3
15.6	68.5	63.7	59.6	56.1	53.1	50.4	48.0	45.8	43.8	42.0	40.4	38.9	37.5	36.2	35.0	33.8	32.8	31.8	30.8	30.0	29.1	28.3	27.6	26.8	26.1	25.5
15.7	68.7	63.9	59.8	56.3	53.2	50.5	48.1	46.0	44.0	42.2	40.5	39.0	37.6	36.3	35.1	34.0	32.9	31.9	31.0	30.1	29.2	28.4	27.7	26.9	26.3	25.6
15.8	68.9	64.1	60.0	56.5	53.4	50.7	48.3	46.1	44.1	42.3	40.7	39.2	37.8	36.5	35.3	34.1	33.1	32.1	31.1	30.2	29.4	28.6	27.8	27.1	26.4	25.7
15.9	69.1	64.3	60.2	56.7	53.6	50.9	48.4	46.3	44.3	42.5	40.8	39.3	37.9	36.6	35.4	34.3	33.2	32.2	31.2	30.3	29.5	28.7	27.9	27.2	26.5	25.8
16.0	69.3	64.5	60.4	56.8	53.8	51.0	48.6	46.4	44.4	42.6	41.0	39.5	38.1	36.8	35.5	34.4	33.3	32.3	31.4	30.5	29.6	28.8	28.1	27.3	26.6	26.0
16.1	69.5	64.7	60.6	57.0	53.9	51.2	48.8	46.6	44.6	42.8	41.1	39.6	38.2	36.9	35.7	34.5	33.5	32.4	31.5	30.6	29.8	28.9	28.2	27.4	26.7	26.1
16.2	69.7	64.9	60.7	57.2	54.1	51.4	48.9	46.7	44.8	42.9	41.3	39.8	38.3	37.0	35.8	34.7	33.6	32.6	31.6	30.7	29.9	29.1	28.3	27.6	26.9	26.2
16.3	69.9	65.0	60.9	57.4	54.3	51.5	49.1	46.9	44.9	43.1	41.4	39.9	38.5	37.2	35.9	34.8	33.7	32.7	31.8	30.9	30.0	29.2	28.4	27.7	27.0	26.3
16.4	70.1	65.2	61.1	57.6	54.4	51.7	49.3	47.1	45.1	43.2	41.6	40.0	38.6	37.3	36.1	34.9	33.9	32.8	31.9	31.0	30.1	29.3	28.5	27.8	27.1	26.4
16.5	70.3	65.4	61.3	57.7	54.6	51.9	49.4	47.2	45.2	43.4	41.7	40.2	38.8	37.4	36.2	35.1	34.0	33.0	32.0	31.1	30.3	29.4	28.7	27.9	27.2	26.6
16.6	70.5	65.6	61.5	57.9	54.8	52.0	49.6	47.4	45.4	43.5	41.9	40.3	38.9	37.6	36.4	35.2	34.1	33.1	32.1	31.2	30.4	29.6	28.8	28.1	27.3	26.7
16.7	70.7	65.8	61.7	58.1	55.0	52.2	49.7	47.5	45.5	43.7	42.0	40.5	39.0	37.7	36.5	35.3	34.3	33.2	32.3	31.4	30.5	29.7	28.9	28.2	27.5	26.8
16.8	70.9	66.0	61.8	58.3	55.1	52.4	49.9	47.7	45.7	43.8	42.2	40.6	39.2	37.9	36.6	35.5	34.4	33.4	32.4	31.5	30.6	29.8	29.0	28.3	27.6	26.9
16.9	71.1	66.2	62.0	58.4	55.3	52.5	50.0	47.8	45.8	44.0	42.3	40.8	39.3	38.0	36.8	35.6	34.5	33.5	32.5	31.6	30.8	29.9	29.2	28.4	27.7	27.0
17.0	71.3	66.4	62.2	58.6	55.5	52.7	50.2	48.0	46.0	44.1	42.4	40.9	39.5	38.1	36.9	35.7	34.6	33.6	32.7	31.7	30.9	30.1	29.3	28.5	27.8	27.2
17.1	71.5	66.6	62.4	58.8	55.6	52.8	50.4	48.1	46.1	44.3	42.6	41.0	39.6	38.3	37.0	35.9	34.8	33.7	32.8	31.9	31.0	30.2	29.4	28.7	27.9	27.3
17.2	71.7	66.7	62.6	58.9	55.8	53.0	50.5	48.3	46.3	44.4	42.7	41.2	39.7	38.4	37.2	36.0	34.9	33.9	32.9	32.0	31.1	30.3	29.5	28.8	28.1	27.4
17.3	71.9	66.9	62.7	59.1	56.0	53.2	50.7	48.4	46.4	44.6	42.9	41.3	39.9	38.5	37.3	36.1	35.0	34.0	33.0	32.1	31.3	30.4	29.6	28.9	28.2	27.5
17.4	72.1	67.1	62.9	59.3	56.1	53.3	50.8	48.6	46.6	44.7	43.0	41.5	40.0	38.7	37.4	36.3	35.2	34.1	33.2	32.2	31.4	30.5	29.8	29.0	28.3	27.6
17.5	72.3	67.3	63.1	59.5	56.3	53.5	51.0	48.7	46.7	44.8	43.2	41.6	40.1	38.8	37.6	36.4	35.3	34.3	33.3	32.4	31.5	30.7	29.9	29.1	28.4	27.7
17.6	72.4	67.5	63.3	59.6	56.4	53.6	51.1	48.9	46.8	45.0	43.3	41.7	40.3	38.9	37.7	36.5	35.4	34.4	33.4	32.5	31.6	30.8	30.0	29.3	28.5	27.9
17.7	72.6	67.7	63.4	59.8	56.6	53.8	51.3	49.0	47.0	45.1	43.4	41.9	40.4	39.1	37.8	36.6	35.5	34.5	33.5	32.6	31.7	30.9	30.1	29.4	28.7	28.0
17.8	72.8	67.8	63.6	60.0	56.8	54.0	51.4	49.2	47.1	45.3	43.6	42.0	40.6	39.2	37.9	36.8	35.7	34.6	33.7	32.7	31.9	31.0	30.2	29.5	28.8	28.1
17.9	73.0	68.0	63.8	60.1	56.9	54.1	51.6	49.3	47.3	45.4	43.7	42.1	40.7	39.3	38.1	36.9	35.8	34.8	33.8	32.9	32.0	31.2	30.4	29.6	28.9	28.2
18.0	73.2	68.2	64.0	60.3	57.1	54.3	51.7	49.5	47.4	45.6	43.9	42.3	40.8	39.5	38.2	37.0	35.9	34.9	33.9	33.0	32.1	31.3	30.5	29.7	29.0	28.3
18.1	73.4	68.4	64.1	60.5	57.3	54.4	51.9	49.6	47.6	45.7	44.0	42.4	41.0	39.6	38.3	37.2	36.1	35.0	34.0	33.1	32.2	31.4	30.6	29.8	29.1	28.4
18.2	73.6	68.6	64.3	60.6	57.4	54.6	52.0	49.8	47.7	45.8	44.1	42.5	41.1	39.7	38.5	37.3	36.2	35.1	34.2	33.2	32.3	31.5	30.7	30.0	29.2	28.6
18.3	73.8	68.7	64.5	60.8	57.6	54.7	52.2	49.9	47.9	46.0	44.3	42.7	41.2	39.9	38.6	37.4	36.3	35.3	34.3	33.4	32.5	31.6	30.8	30.1	29.4	28.7
18.4	74.0	68.9	64.6	61.0	57.7	54.9	52.3	50.1	48.0	46.1	44.4	42.8	41.4	40.0	38.7	37.5	36.4	35.4	34.4	33.5	32.6	31.8	31.0	30.2	29.5	28.8
18.5	74.2	69.1	64.8	61.1	57.9	55.0	52.5	50.2	48.1	46.3	44.5	43.0	41.5	40.1	38.9	37.7	36.6	35.5	34.5	33.6	32.7	31.9	31.1	30.3	29.6	28.9
18.6	74.3	69.3	65.0	61.3	58.0	55.2	52.6	50.4	48.3	46.4	44.7	43.1	41.6	40.3	39.0	37.8	36.7	35.6	34.6	33.7	32.8	32.0	31.2	30.4	29.7	29.0
18.7	74.5	69.5	65.2	61.4	58.2	55.3	52.8	50.5	48.4	46.5	44.8	43.2	41.8	40.4	39.1	37.9	36.8	35.8	34.8	33.8	33.0	32.1	31.3	30.5	29.8	29.1
18.8	74.7	69.6	65.3	61.6	58.4	55.5	52.9	50.7	48.6	46.7	45.0	43.4	41.9	40.5	39.2	38.1	36.9	35.9	34.9	34.0	33.1	32.2	31.4	30.7	29.9	29.2
18.9	74.9	69.8	65.5	61.8	58.5	55.7	53.1	50.8	48.7	46.8	45.1	43.5	42.0	40.6	39.4	38.2	37.1	36.0	35.0	34.1	33.2	32.3	31.5	30.8	30.1	29.4

*Height = total tree height.

Table A8. Provincial white spruce site index prediction table at young ages.

Height	Ring count at 1.3 m above ground																									
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
1.5	7.0	6.1	5.4	4.8	4.4	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8
1.6	9.2	8.0	7.1	6.4	5.7	5.2	4.8	4.4	4.1	3.8	3.6	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1
1.7	11.1	9.7	8.6	7.7	7.0	6.3	5.8	5.3	5.0	4.6	4.3	4.1	3.8	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3
1.8	12.8	11.3	10.0	9.0	8.1	7.4	6.8	6.2	5.8	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.0	2.9	2.8	2.8	2.7	2.6
1.9	14.3	12.7	11.3	10.2	9.2	8.4	7.7	7.0	6.5	6.1	5.6	5.3	5.0	4.7	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.9
2.0	15.7	14.0	12.5	11.2	10.2	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1
2.1	17.0	15.1	13.6	12.3	11.1	10.2	9.3	8.6	7.9	7.4	6.9	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4
2.2	18.2	16.2	14.6	13.2	12.0	11.0	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.3	4.2	4.0	3.9	3.7	3.6
2.3	19.3	17.3	15.6	14.1	12.9	11.8	10.8	10.0	9.3	8.6	8.0	7.5	7.1	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8
2.4	20.4	18.3	16.5	15.0	13.6	12.5	11.5	10.6	9.9	9.2	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1
2.5	21.3	19.2	17.3	15.8	14.4	13.2	12.2	11.3	10.5	9.7	9.1	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.8	4.7	4.5	4.3
2.6	22.3	20.1	18.2	16.5	15.1	13.9	12.8	11.9	11.0	10.3	9.6	9.0	8.5	8.0	7.5	7.1	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.6
2.7	23.2	20.9	19.0	17.3	15.8	14.6	13.5	12.5	11.6	10.8	10.1	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8
2.8	24.0	21.7	19.7	18.0	16.5	15.2	14.1	13.0	12.1	11.3	10.6	9.9	9.3	8.8	8.3	7.9	7.5	7.1	6.8	6.4	6.2	5.9	5.7	5.4	5.2	5.0
2.9	24.9	22.5	20.4	18.7	17.2	15.8	14.6	13.6	12.7	11.8	11.1	10.4	9.8	9.2	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3
3.0	25.7	23.2	21.1	19.3	17.8	16.4	15.2	14.1	13.2	12.3	11.5	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.4	7.0	6.7	6.4	6.2	5.9	5.7	5.5
3.1	26.4	23.9	21.8	20.0	18.4	17.0	15.7	14.6	13.6	12.8	12.0	11.2	10.6	10.0	9.4	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7
3.2	27.2	24.6	22.5	20.6	19.0	17.5	16.3	15.1	14.1	13.2	12.4	11.7	11.0	10.4	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9
3.3	27.9	25.3	23.1	21.2	19.5	18.1	16.8	15.6	14.6	13.7	12.8	12.1	11.4	10.7	10.2	9.6	9.2	8.7	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.1
3.4	28.6	25.9	23.7	21.8	20.1	18.6	17.3	16.1	15.0	14.1	13.2	12.5	11.8	11.1	10.5	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4
3.5	29.2	26.6	24.3	22.3	20.6	19.1	17.8	16.6	15.5	14.5	13.6	12.8	12.1	11.5	10.9	10.3	9.8	9.3	8.9	8.5	8.1	7.7	7.4	7.1	6.8	6.6
3.6	29.9	27.2	24.9	22.9	21.1	19.6	18.2	17.0	15.9	14.9	14.0	13.2	12.5	11.8	11.2	10.6	10.1	9.6	9.2	8.7	8.4	8.0	7.7	7.4	7.1	6.8
3.7	30.5	27.8	25.4	23.4	21.6	20.1	18.7	17.5	16.3	15.3	14.4	13.6	12.8	12.2	11.5	10.9	10.4	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3	7.0
3.8	31.1	28.3	26.0	23.9	22.1	20.6	19.1	17.9	16.8	15.7	14.8	14.0	13.2	12.5	11.8	11.2	10.7	10.2	9.7	9.3	8.9	8.5	8.1	7.8	7.5	7.2
3.9	31.7	28.9	26.5	24.4	22.6	21.0	19.6	18.3	17.2	16.1	15.2	14.3	13.5	12.8	12.2	11.5	11.0	10.5	10.0	9.5	9.1	8.7	8.4	8.0	7.7	7.4
4.0	32.3	29.5	27.0	24.9	23.1	21.5	20.0	18.7	17.6	16.5	15.5	14.7	13.9	13.1	12.5	11.9	11.3	10.7	10.3	9.8	9.4	9.0	8.6	8.3	7.9	7.6
4.1	32.9	30.0	27.5	25.4	23.6	21.9	20.4	19.1	18.0	16.9	15.9	15.0	14.2	13.5	12.8	12.1	11.6	11.0	10.5	10.1	9.6	9.2	8.8	8.5	8.2	7.8
4.2	33.4	30.5	28.0	25.9	24.0	22.3	20.9	19.5	18.3	17.2	16.3	15.4	14.5	13.8	13.1	12.4	11.8	11.3	10.8	10.3	9.9	9.5	9.1	8.7	8.4	8.1
4.3	34.0	31.0	28.5	26.4	24.4	22.8	21.3	19.9	18.7	17.6	16.6	15.7	14.9	14.1	13.4	12.7	12.1	11.6	11.0	10.6	10.1	9.7	9.3	8.9	8.6	8.3
4.4	34.5	31.6	29.0	26.8	24.9	23.2	21.7	20.3	19.1	18.0	16.9	16.0	15.2	14.4	13.7	13.0	12.4	11.8	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5
4.5	35.1	32.0	29.5	27.3	25.3	23.6	22.1	20.7	19.4	18.3	17.3	16.3	15.5	14.7	14.0	13.3	12.7	12.1	11.6	11.0	10.6	10.1	9.7	9.4	9.0	8.7
4.6	35.6	32.5	29.9	27.7	25.7	24.0	22.4	21.0	19.8	18.7	17.6	16.7	15.8	15.0	14.3	13.6	12.9	12.3	11.8	11.3	10.8	10.4	10.0	9.6	9.2	8.9
4.7	36.1	33.0	30.4	28.1	26.1	24.4	22.8	21.4	20.1	19.0	17.9	17.0	16.1	15.3	14.5	13.8	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.4	9.1
4.8	36.6	33.5	30.8	28.5	26.5	24.8	23.2	21.8	20.5	19.3	18.3	17.3	16.4	15.6	14.8	14.1	13.5	12.9	12.3	11.8	11.3	10.8	10.4	10.0	9.6	9.2
4.9	37.1	33.9	31.3	29.0	26.9	25.1	23.5	22.1	20.8	19.6	18.6	17.6	16.7	15.9	15.1	14.4	13.7	13.1	12.5	12.0	11.5	11.0	10.6	10.2	9.8	9.4
5.0	37.5	34.4	31.7	29.4	27.3	25.5	23.9	22.5	21.2	20.0	18.9	17.9	17.0	16.1	15.4	14.6	14.0	13.4	12.8	12.2	11.7	11.3	10.8	10.4	10.0	9.6
5.1	38.0	34.8	32.1	29.8	27.7	25.9	24.3	22.8	21.5	20.3	19.2	18.2	17.3	16.4	15.6	14.9	14.2	13.6	13.0	12.5	11.9	11.5	11.0	10.6	10.2	9.8
5.2	38.5	35.3	32.5	30.2	28.1	26.2	24.6	23.1	21.8	20.6	19.5	18.5	17.5	16.7	15.9	15.2	14.5	13.8	13.2	12.7	12.2	11.7	11.2	10.8	10.4	10.0
5.3	38.9	35.7	32.9	30.6	28.5	26.6	25.0	23.5	22.1	20.9	19.8	18.8	17.8	17.0	16.2	15.4	14.7	14.1	13.5	12.9	12.4	11.9	11.4	11.0	10.6	10.2
5.4	39.4	36.1	33.3	30.9	28.8	27.0	25.3	23.8	22.4	21.2	20.1	19.0	18.1	17.2	16.4	15.7	15.0	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.4
5.5	39.8	36.5	33.7	31.3	29.2	27.3	25.6	24.1	22.7	21.5	20.4	19.3	18.4	17.5	16.7	15.9	15.2	14.5	13.9	13.4	12.8	12.3	11.8	11.4	11.0	10.6
5.6	40.2	36.9	34.1	31.7	29.5	27.6	26.0	24.4	23.1	21.8	20.7	19.6	18.6	17.7	16.9	16.2	15.4	14.8	14.2	13.6	13.0	12.5	12.0	11.6	11.2	10.8
5.7	40.7	37.3	34.5	32.0	29.9	28.0	26.3	24.7	23.4	22.1	20.9	19.9	18.9	18.0	17.2	16.4	15.7	15.0	14.4	13.8	13.2	12.7	12.2	11.8	11.3	10.9
5.8	41.1	37.7	34.9	32.4	30.2	28.3	26.6	25.0	23.7	22.4	21.2	20.1	19.2	18.3	17.4	16.6	15.9	15.2	14.6	14.0	13.4	12.9	12.4	12.0	11.5	11.1
5.9	41.5	38.1	35.3	32.8	30.6	28.6	26.9	25.4	23.9	22.7	21.5	20.4	19.4	18.5	17.7	16.9	16.1	15.5	14.8	14.2	13.7	13.1	12.6	12.2	11.7	11.3
6.0	41.9	38.5	35.6	33.1	30.9	29.0	27.2	25.7	24.2	22.9	21.8	20.7	19.7	18.8	17.9	17.1	16.4	15.7	15.0	14.4	13.9	13.3	12.8	12.3	11.9	11.5
6.1	42.3	38.9	36.0	33.5	31.2	29.3	27.5	26.0	24.5	23.2	22.0	20.9	19.9	19.0	18.1	17.3	16.6	15.9	15.2	14.6	14.1	13.5	13.0	12.5	12.1	11.7
6.2	42.7	39.3	36.4	33.8	31.6	29.6	27.8	26.2	24.8	23.5	22.3	21.2	20.2	19.3	18.4	17.6	16.8	16.1	15.5	14.8	14.3	13.7	13.2	12.7	12.3	11.8
6.3	43.1	39.7	36.7	34.1	31.9	29.9	28.1	26.5	25.1	23.8	22.6	21.5	20.4	19.5	18.6	17.8	17.0	16.3	15.7	15.0	14.5	13.9	13.4	12.9	12.4	12.0
6.4	43.5	40.0	37.1	34.5	32.2	30.2	28.4	26.8	25.4	24.0	22.8	21.7	20.7	19.7	18.8	18.0	17.3	16.5	15.9	15.3	14.7	14.1	13.6	13.1	12.6	12.2
6.5	43.9	40.4	37.4	34.8	32.5	30.5	28.7	27.1	25.6	24.3	23.1	22.0	20.9	20.0	19.1	18.3	17.5	16.8	16.1	15.5	14.9	14.3	13.8	13.3	12.8	12.4
6.6	44.3	40.8	37.7	35.1	32.9	30.8	29.0	27.4	25.9	24.6	23.3	22.2	21.2	20.2	19.3	18.5	17.7	17.0	16.3	15.7	15.1	14.5	14.0	13.5	13.0	12.5
6.7	44.6	41.1	38.1	35.5	33.2	31.1	29.3	27.7	26.2	24.8	23.6	22.5	21.4	20.4	19.5	18.7	17.9	17.2	16.5	15.9	15.2	14.7	14.1	13.6	13.2	12.7
6.8	45.0	41.5	38.4	35.8	33.5	31.4	29.6	27.9	26.4	25.1	23.8	22.7	21.6	20.7	19.8	18.9	18.1	17.4	16.7	16.0	15.4	14.9	14.3	13.8	13.3	12.9
6.9	45.4	41.8	38.8	36.1	33.8	31.7	29.9	28.2	26.7	25.3	24.1	22.9	21.9	20.9	20.0	19.1	18.3	17.6	16.9	16.2	15.6	15.1	14.5	14.0	13.5	13.0
7.0	45.8	42.2	39.1	36.4	34.1	32.0	30.1	28.5	27.0	25.6	24.3	23.2	22.1	21.1	20.2	19.3	18.5	17.8	17.1	16.4	15.8	15.2	14.7	14.2	13.7	13.2
7.1	46.1	42.5	39.4	36.7	34.4	32.3	30.4	28.7	27.2	25.8	24.6	23.4	22.3	21.3	20.4	19.6	18.8	18.0	17.3	16.6	16.0	15.4	14.9	14.3	13.8	13.4
7.2	46.5	42.8	39.7	37.0	34.7	32.6	30.7	29.0	27.5	26.1	24.8	23.6	22.6	21.6	20.6	19.8	19.0	18.2	17.5	16.8	16.2	15.6	15.0	14.5	14.0	13.5
7.3	46.8	43.2	40.0	37.3	35.0	32.9	31.0	29.3	27.7	26.3	25.1	23.9	22.8	21.8	20.8	20.0	19.2	18.4	17.7	17.0	16.4	15.8	15.2	14.7	14.2	13.7
7.4	47.2	43.5	40.4	37.6	35.2	33.1	31.2	29.5	28.0	26.6	25.3	24.1	23.0	22.0	21.1	20.2	19.4	18.6	17.9	17.2	16.6	16.0	15.4	14.9	14.4	13.9
7.5	47.5	43.8	40.7	37.9	35.5	33.4	31.5	29.8	28.2	26.8	25.5	24.3	23.2	22.2	21.3	20.4	19.6	18.8	18.1	17.4	16.7	16.1	15.6	15.0	14.5	14.0
7.6	47.9	44.2	41.0	38.2	35.8	33.7	31.8	30.0	28.5	27.1	25.8	24.6	23.5	22.4	21.5	20.6	19.8	19.0	18.3	17.6	16.9	16.3	15.7	15.2	14.7	14.2
7.7	48.2	44.5	41.3	38.5	36.1	33.9	32.0	30.3	28.7	27.3	26.0	24.8	23.7	22.6	21.7	20.8	20.0	19.2	18.4	17.8	17.1	16.5	15.9	15.4	14.9	14.4
7.8	48.5	44.8	41.6	38.8	36.4	34.2	32.3	30.5	29.0	27.5	26.2	25.0	23.9	22.9	21.9	21.0	20.2	19.4	18.6	17.9	17.3	16.7	16.1	15.5	15.0	14.5
7.9	48.9	45.1	41.9	39.1	36.7	34.5	32.5	30.8	29.2	27.8	26.4	25.2	24.1	23.1	22.1	21.2	20.4	19.6	18.8	18.1	17.5	16.8	16.3	15.7	15.2	14.7
8.0	49.2	45.4	42.2	39.4	36.9	34.7	32.8	31.0	29.4	28.0	26.7	25.4	24.3	23.3	22.3	21.4	20.5	19.8	19.0	18.3	17.6	17.0	16.4	15.9	15.3	14.8
8.1	49.5	45.7	42.5	39.7	37.2	35.0	33.0	31.3	29.7	28.2	26.9	25.7	24.5	23.5	22.5	21.6	20.7	19.9	19.2	18.5	17.8	17.2	16.6	16.0	15.5	15.0
8.2	49.8	46.0	42.8	39.9	37.5	35.3	33.3	31.5	29.9	28.5	27.1	25.9	24.7	23.7	22.7	21.8	20.9	20.1	19.4	18.7	18.0	17.4	16.8	16.2	15.7	15.2
8.3	50.2	46.3	43.1	40.2	37.7	35.5	33.5	31.8	30.2	28.7	27.3	26.1	25.0	23.9	22.9	22.0	21.1	20.3	19.6	18.8	18.2	17.5	16.9	16.4	15.8	15.3
8.4	50.5	46.6	43.3	40.5	38.0	35.8	33.8	32.0	30.4	28.9	27.6	26.3	25.2	24.1	23.1	22.2	21.3	20.5	19.7	19.0	18.3	17.7	17.1	16.5	16.0	15.5
8.5	50.8	46.9	43.6	40.8	38.3	36.0	34.0	32.2	30.6	29.1	27.8	26.5	25.4	24.3	23.3	22.4	21.5	20.7	19.9	19.2	18.5	17.9	17.3	16.7	16.1	15.6
8.6	51.1	47.2	43.9	41.0	38.5	36.3	34.3	32.5	30.8	29.4	28.0	26.7	25.6	24.5	23.5	22.6	21.7	20.9	20.1	19.4	18.7	18.0	17.4	16.9	16.3	15.8
8.7	51.4	47.5	44.2	41.3	38.8	36.5	34.5	32.7	31.1	29.6	28.2	26.9	25.8	24.7	23.7	22.7	21.9	21.0	20.3	19.5	18.9	18.2	17.6	17.0	16.5	15.9
8.8	51.7	47.8	44.5	41.6	39.0	36.8	34.8	32.9	31.3	29.8	28.4	27.1	26.0	24.9	23.9	22.9	22.1	21.2	20.4	19.7	19.0	18.4	17.8	17.2	16.6	16.1
8.9	52.0	48.1	44.8	41.8	39.3	37.0	35.0	33.2	31.5	30.0	28.6	27.3	26.2	25.1	24.1	23.1	22.2	21.4	20.6	19.9	19.2	18.5	17.9	17.3	16.8	16.2
9.0	52.3	48.4	45.0	42.1	39.5	37.3	35.2	33.4	31.7	30.2	28.8	27.6	26.4	25.3	24.3	23.3	22.4	21.6	20.8	20.1	19.4	18.7	18.1	17.5	16.9	16.4
9.1	52.6	48.7	45.3	42.4	39.8	37.5	35.5	33.6	32.0	30.4	29.0	27.8	26.6	25.5	24.4	23.5	22.6	21.8	21.0	20.2	19.5	18.9	18.2	17.6	17.1	16.5
9.2	52.9	49.0	45.6	42.6	40.0	37.7	35.7	33.8	32.2	30.6	29.2	28.0	26.8	25.7	24.6	23.7	22.8	21.9	21.1	20.4	19.7	19.0	18.4	17.8	17.2	16.7
9.3	53.2	49.2	45.8	42.9	40.3	38.0	35.9	34.1	32.4	30.9	29.4	28.2	27.0	25.9	24.8	23.9	23.0	22.1	21.3	20.6	19.9	19.2	18.6	18.0	17.4	16.8
9.4	53.5	49.5	46.1	43.1	40.5	38.2	36.1	34.3	32.6	31.1	29.7	28.4	27.2	26.0	25.0	24.0	23.1	22.3	21.5	20.7	20.0	19.4	18.7	18.1	17.5	17.0
9.5	53.8	49.8	46.4	43.4	40.8	38.4	36.4	34.5	32.8	31.3	29.9	28.6	27.3	26.2	25.2	24.2	23.3	22.5	21.7	20.9	20.2	19.5	18.9	18.3	17.7	17.1
9.6	54.1	50.1	46.6	43.6	41.0	38.7	36.6	34.7	33.0	31.5	30.1	28.7	27.5	26.4	25.4	24.4	23.5	22.6	21.8	21.1	20.4	19.7	19.0	18.4	17.8	17.3
9.7	54.4	50.4	46.9	43.9	41.2	38.9	36.8	34.9	33.2	31.7	30.3	28.9	27.7	26.6	25.6	24.6	23.7	22.8	22.0	21.2	20.5	19.8	19.2	18.6	18.0	17.4
9.8	54.7	50.6	47.1	44.1	41.5	39.1	37.0	35.2	33.4	31.9	30.5	29.1	27.9	26.8	25.7	24.8	23.8	23.0	22.2	21.4	20.7	20.0	19.3	18.7	18.1	17.6
9.9	55.0	50.9	47.4	44.4	41.7	39.4	37.3	35.4	33.7	32.1	30.7	29.3	28.1	27.0	25.9	24.9	24.0	23.1	22.3	21.6	20.8	20.1	19.5	18.9	18.3	17.7
10.0	55.3	51.2	47.7	44.6	42.0	39.6	37.5	35.6	33.9	32.3	30.8	29.5	28.3	27.2	26.1	25.1	24.2	23.3	22.5	21.7	21.0	20.3	19.6	19.0	18.4	17.9
10.1	55.5	51.4	47.9	44.9	42.2	39.8	37.7	35.8	34.1	32.5	31.0	29.7	28.5	27.3	26.3	25.3	24.3	23.5	22.7	21.9	21.1	20.5	19.8	19.2	18.6	18.0
10.2	55.8	51.7	48.2	45.1	42.4	40.0	37.9	36.0	34.3	32.7	31.2	29.9	28.7	27.5	26.4	25.5	24.5	23.6	22.8	22.0	21.3	20.6	20.0	19.3	18.7	18.2

*Height = total tree height.

Table A8. Provincial white spruce site index prediction table at young ages (continued).

Height	Ring count at 1.3 m above ground																									
(m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Predicted site index (m) at 50 years Bhage																									
10.3	56.1	52.0	48.4	45.1	42.7	40.3	38.1	36.2	34.5	32.9	31.4	30.1	28.8	27.7	26.6	25.6	24.7	23.8	23.0	22.2	21.5	20.8	20.1	19.5	18.9	18.3
10.4	56.4	52.2	48.7	45.6	42.9	40.5	38.4	36.4	34.7	33.1	31.6	30.3	29.0	27.9	26.8	25.8	24.9	24.0	23.1	22.4	21.6	20.9	20.3	19.6	19.0	18.5
10.5	56.6	52.5	48.9	45.8	43.1	40.7	38.6	36.6	34.9	33.3	31.8	30.5	29.2	28.1	27.0	26.0	25.0	24.1	23.3	22.5	21.8	21.1	20.4	19.8	19.2	18.6
10.6	56.9	52.7	49.2	46.1	43.3	40.9	38.8	36.8	35.1	33.5	32.0	30.6	29.4	28.2	27.1	26.1	25.2	24.3	23.5	22.7	21.9	21.2	20.6	19.9	19.3	18.7
10.7	57.2	53.0	49.4	46.3	43.6	41.1	39.0	37.0	35.3	33.7	32.2	30.8	29.6	28.4	27.3	26.3	25.4	24.5	23.6	22.8	22.1	21.4	20.7	20.1	19.5	18.9
10.8	57.5	53.2	49.6	46.5	43.8	41.4	39.2	37.2	35.5	33.9	32.4	31.0	29.8	28.6	27.5	26.5	25.5	24.6	23.8	23.0	22.2	21.5	20.9	20.2	19.6	19.0
10.9	57.7	53.5	49.9	46.8	44.0	41.6	39.4	37.4	35.7	34.0	32.6	31.2	29.9	28.8	27.7	26.6	25.7	24.8	23.9	23.1	22.4	21.7	21.0	20.4	19.8	19.2
11.0	58.0	53.7	50.1	47.0	44.2	41.8	39.6	37.6	35.9	34.2	32.7	31.4	30.1	28.9	27.8	26.8	25.8	24.9	24.1	23.3	22.5	21.8	21.2	20.5	19.9	19.3
11.1	58.2	54.0	50.4	47.2	44.5	42.0	39.8	37.8	36.1	34.4	32.9	31.6	30.3	29.1	28.0	27.0	26.0	25.1	24.3	23.5	22.7	22.0	21.3	20.7	20.0	19.4
11.2	58.5	54.2	50.6	47.4	44.7	42.2	40.0	38.0	36.2	34.6	33.1	31.7	30.5	29.3	28.2	27.1	26.2	25.3	24.4	23.6	22.8	22.1	21.4	20.8	20.2	19.6
11.3	58.8	54.5	50.8	47.7	44.9	42.4	40.2	38.2	36.4	34.8	33.3	31.9	30.6	29.4	28.3	27.3	26.3	25.4	24.6	23.8	23.0	22.3	21.6	20.9	20.3	19.7
11.4	59.0	54.7	51.1	47.9	45.1	42.6	40.4	38.4	36.6	35.0	33.5	32.1	30.8	29.6	28.5	27.5	26.5	25.6	24.7	23.9	23.1	22.4	21.7	21.1	20.5	19.9
11.5	59.3	55.0	51.3	48.1	45.3	42.8	40.6	38.6	36.8	35.2	33.7	32.3	31.0	29.8	28.7	27.6	26.7	25.7	24.9	24.1	23.3	22.6	21.9	21.2	20.6	20.0
11.6	59.5	55.2	51.5	48.3	45.5	43.0	40.8	38.8	37.0	35.4	33.8	32.4	31.2	30.0	28.8	27.8	26.8	25.9	25.0	24.2	23.4	22.7	22.0	21.4	20.7	20.1
11.7	59.8	55.5	51.8	48.6	45.7	43.3	41.0	39.0	37.2	35.5	34.0	32.6	31.3	30.1	29.0	28.0	27.0	26.1	25.2	24.4	23.6	22.9	22.2	21.5	20.9	20.3
11.8	60.0	55.7	52.0	48.8	46.0	43.5	41.2	39.2	37.4	35.7	34.2	32.8	31.5	30.3	29.2	28.1	27.1	26.2	25.3	24.5	23.7	23.0	22.3	21.6	21.0	20.4
11.9	60.3	55.9	52.2	49.0	46.2	43.7	41.4	39.4	37.6	35.9	34.4	33.0	31.7	30.5	29.3	28.3	27.3	26.4	25.5	24.7	23.9	23.1	22.5	21.8	21.2	20.6
12.0	60.5	56.2	52.4	49.2	46.4	43.9	41.6	39.6	37.8	36.1	34.5	33.1	31.8	30.6	29.5	28.4	27.4	26.5	25.6	24.8	24.0	23.3	22.6	21.9	21.3	20.7
12.1	60.8	56.4	52.7	49.4	46.6	44.1	41.8	39.8	37.9	36.3	34.7	33.3	32.0	30.8	29.6	28.6	27.6	26.7	25.8	25.0	24.2	23.4	22.7	22.1	21.4	20.8
12.2	61.0	56.6	52.9	49.6	46.8	44.3	42.0	40.0	38.1	36.4	34.9	33.5	32.2	30.9	29.8	28.7	27.8	26.8	25.9	25.1	24.3	23.6	22.9	22.2	21.6	21.0
12.3	61.3	56.9	53.1	49.9	47.0	44.5	42.2	40.2	38.3	36.6	35.1	33.6	32.3	31.1	30.0	28.9	27.9	27.0	26.1	25.3	24.5	23.7	23.0	22.3	21.7	21.1
12.4	61.5	57.1	53.3	50.1	47.2	44.7	42.4	40.3	38.5	36.8	35.2	33.8	32.5	31.3	30.1	29.1	28.1	27.1	26.2	25.4	24.6	23.9	23.2	22.5	21.8	21.2
12.5	61.8	57.3	53.6	50.3	47.4	44.9	42.6	40.5	38.7	37.0	35.4	34.0	32.7	31.4	30.3	29.2	28.2	27.3	26.4	25.5	24.8	24.0	23.3	22.6	22.0	21.4
12.6	62.0	57.6	53.8	50.5	47.6	45.1	42.8	40.7	38.9	37.2	35.6	34.2	32.8	31.6	30.4	29.4	28.4	27.4	26.5	25.7	24.9	24.1	23.4	22.8	22.1	21.5
12.7	62.3	57.8	54.0	50.7	47.8	45.3	43.0	40.9	39.0	37.3	35.8	34.3	33.0	31.8	30.6	29.5	28.5	27.6	26.7	25.8	25.0	24.3	23.6	22.9	22.2	21.6
12.8	62.5	58.0	54.2	50.9	48.0	45.4	43.2	41.1	39.2	37.5	35.9	34.5	33.2	31.9	30.8	29.7	28.7	27.7	26.8	26.0	25.2	24.4	23.7	23.0	22.4	21.8
12.9	62.7	58.3	54.4	51.1	48.2	45.6	43.3	41.3	39.4	37.7	36.1	34.7	33.3	32.1	30.9	29.8	28.8	27.9	27.0	26.1	25.3	24.6	23.8	23.2	22.5	21.9
13.0	63.0	58.5	54.7	51.3	48.4	45.8	43.5	41.4	39.6	37.8	36.3	34.8	33.5	32.2	31.1	30.0	29.0	28.0	27.1	26.3	25.5	24.7	24.0	23.3	22.6	22.0
13.1	63.2	58.7	54.9	51.5	48.6	46.0	43.7	41.6	39.7	38.0	36.4	35.0	33.6	32.4	31.2	30.1	29.1	28.2	27.3	26.4	25.6	24.8	24.1	23.4	22.8	22.2
13.2	63.4	58.9	55.1	51.7	48.8	46.2	43.9	41.8	39.9	38.2	36.6	35.1	33.8	32.5	31.4	30.3	29.3	28.3	27.4	26.6	25.7	25.0	24.3	23.6	22.9	22.3
13.3	63.7	59.2	55.3	51.9	49.0	46.4	44.1	42.0	40.1	38.4	36.8	35.3	34.0	32.7	31.5	30.4	29.4	28.5	27.6	26.7	25.9	25.1	24.4	23.7	23.0	22.4
13.4	63.9	59.4	55.5	52.2	49.2	46.6	44.3	42.2	40.3	38.5	36.9	35.5	34.1	32.9	31.7	30.6	29.6	28.6	27.7	26.8	26.0	25.3	24.5	23.8	23.2	22.5
13.5	64.1	59.6	55.7	52.4	49.4	46.8	44.5	42.3	40.4	38.7	37.1	35.6	34.3	33.0	31.8	30.7	29.7	28.7	27.8	27.0	26.2	25.4	24.7	24.0	23.3	22.7
13.6	64.4	59.8	55.9	52.6	49.6	47.0	44.6	42.5	40.6	38.9	37.3	35.8	34.4	33.2	32.0	30.9	29.9	28.9	28.0	27.1	26.3	25.5	24.8	24.1	23.4	22.8
13.7	64.6	60.0	56.1	52.8	49.8	47.2	44.8	42.7	40.8	39.0	37.4	36.0	34.6	33.3	32.1	31.0	30.0	29.0	28.1	27.3	26.4	25.7	24.9	24.2	23.6	22.9
13.8	64.8	60.3	56.3	53.0	50.0	47.3	45.0	42.9	41.0	39.2	37.6	36.1	34.7	33.5	32.3	31.2	30.2	29.2	28.3	27.4	26.6	25.8	25.1	24.4	23.7	23.1
13.9	65.1	60.5	56.6	53.2	50.2	47.5	45.2	43.1	41.1	39.4	37.8	36.3	34.9	33.6	32.4	31.3	30.3	29.3	28.4	27.5	26.7	25.9	25.2	24.5	23.8	23.2
14.0	65.3	60.7	56.8	53.4	50.4	47.7	45.4	43.2	41.3	39.5	37.9	36.4	35.1	33.8	32.6	31.5	30.4	29.5	28.5	27.7	26.9	26.1	25.3	24.6	24.0	23.3
14.1	65.5	60.9	57.0	53.5	50.6	47.9	45.5	43.4	41.5	39.7	38.1	36.6	35.2	33.9	32.7	31.6	30.6	29.6	28.7	27.8	27.0	26.2	25.5	24.8	24.1	23.4
14.2	65.7	61.1	57.2	53.7	50.7	48.1	45.7	43.6	41.6	39.9	38.2	36.8	35.4	34.1	32.9	31.8	30.7	29.8	28.8	28.0	27.1	26.3	25.6	24.9	24.2	23.6
14.3	66.0	61.3	57.4	53.9	50.9	48.3	45.9	43.7	41.8	40.0	38.4	36.9	35.5	34.2	33.0	31.9	30.9	29.9	29.0	28.1	27.3	26.5	25.7	25.0	24.3	23.7
14.4	66.2	61.5	57.6	54.1	51.1	48.5	46.1	43.9	42.0	40.2	38.6	37.1	35.7	34.4	33.2	32.1	31.0	30.0	29.1	28.2	27.4	26.6	25.9	25.2	24.5	23.8
14.5	66.4	61.8	57.8	54.3	51.3	48.6	46.2	44.1	42.1	40.4	38.7	37.2	35.8	34.5	33.3	32.2	31.2	30.2	29.2	28.4	27.5	26.7	26.0	25.3	24.6	24.0
14.6	66.6	62.0	58.0	54.5	51.5	48.8	46.4	44.3	42.3	40.5	38.9	37.4	36.0	34.7	33.5	32.4	31.3	30.3	29.4	28.5	27.7	26.9	26.1	25.4	24.7	24.1
14.7	66.9	62.2	58.2	54.7	51.7	49.0	46.6	44.4	42.5	40.7	39.0	37.5	36.1	34.8	33.6	32.5	31.4	30.5	29.5	28.6	27.8	27.0	26.3	25.5	24.9	24.2
14.8	67.1	62.4	58.4	54.9	51.9	49.2	46.8	44.6	42.6	40.8	39.2	37.7	36.3	35.0	33.8	32.6	31.6	30.6	29.7	28.8	27.9	27.1	26.4	25.7	25.0	24.3
14.9	67.3	62.6	58.6	55.1	52.1	49.4	46.9	44.8	42.8	41.0	39.4	37.8	36.4	35.1	33.9	32.8	31.7	30.7	29.8	28.9	28.1	27.3	26.5	25.8	25.1	24.5
15.0	67.5	62.8	58.8	55.3	52.2	49.5	47.1	44.9	43.0	41.2	39.5	38.0	36.6	35.3	34.1	32.9	31.9	30.9	29.9	29.0	28.2	27.4	26.6	25.9	25.2	24.6
15.1	67.7	63.0	59.0	55.5	52.4	49.7	47.3	45.1	43.1	41.3	39.7	38.1	36.7	35.4	34.2	33.1	32.0	31.0	30.1	29.2	28.3	27.5	26.8	26.1	25.4	24.7
15.2	67.9	63.2	59.2	55.7	52.6	49.9	47.5	45.3	43.3	41.5	39.8	38.3	36.9	35.6	34.4	33.2	32.1	31.1	30.2	29.3	28.5	27.7	26.9	26.2	25.5	24.8
15.3	68.2	63.4	59.4	55.9	52.8	50.1	47.6	45.4	43.4	41.6	40.0	38.5	37.0	35.7	34.5	33.4	32.3	31.3	30.3	29.4	28.6	27.8	27.0	26.3	25.6	25.0
15.4	68.4	63.6	59.6	56.0	53.0	50.2	47.8	45.6	43.6	41.8	40.1	38.6	37.2	35.9	34.6	33.5	32.4	31.4	30.5	29.6	28.7	27.9	27.2	26.4	25.7	25.1
15.5	68.6	63.8	59.8	56.2	53.1	50.4	48.0	45.8	43.8	42.0	40.3	38.8	37.3	36.0	34.8	33.6	32.6	31.6	30.6	29.7	28.9	28.1	27.3	26.6	25.9	25.2
15.6	68.8	64.0	59.9	56.4	53.3	50.6	48.1	45.9	43.9	42.1	40.4	38.9	37.5	36.2	34.9	33.8	32.7	31.7	30.7	29.8	29.0	28.2	27.4	26.7	26.0	25.3
15.7	69.0	64.2	60.1	56.6	53.5	50.8	48.3	46.1	44.1	42.3	40.6	39.1	37.6	36.3	35.1	33.9	32.8	31.8	30.9	30.0	29.1	28.3	27.5	26.8	26.1	25.5
15.8	69.2	64.4	60.3	56.8	53.7	50.9	48.5	46.3	44.3	42.4	40.7	39.2	37.8	36.4	35.2	34.1	33.0	32.0	31.0	30.1	29.2	28.4	27.7	26.9	26.2	25.6
15.9	69.4	64.6	60.5	57.0	53.9	51.1	48.6	46.4	44.4	42.6	40.9	39.4	37.9	36.6	35.4	34.2	33.1	32.1	31.1	30.2	29.4	28.6	27.8	27.1	26.4	25.7
16.0	69.6	64.8	60.7	57.2	54.0	51.3	48.8	46.6	44.6	42.7	41.0	39.5	38.1	36.7	35.5	34.3	33.3	32.2	31.3	30.4	29.5	28.7	27.9	27.2	26.5	25.8
16.1	69.9	65.0	60.9	57.3	54.2	51.4	49.0	46.7	44.7	42.9	41.2	39.6	38.2	36.9	35.6	34.5	33.4	32.4	31.4	30.5	29.6	28.8	28.0	27.3	26.6	25.9
16.2	70.1	65.2	61.1	57.5	54.4	51.6	49.1	46.9	44.9	43.0	41.4	39.8	38.4	37.0	35.8	34.6	33.5	32.5	31.5	30.6	29.8	28.9	28.2	27.4	26.7	26.1
16.3	70.3	65.4	61.3	57.7	54.6	51.8	49.3	47.1	45.0	43.2	41.5	39.9	38.5	37.2	35.9	34.8	33.7	32.6	31.7	30.8	29.9	29.1	28.3	27.6	26.9	26.2
16.4	70.5	65.6	61.5	57.9	54.7	52.0	49.5	47.2	45.2	43.3	41.7	40.1	38.6	37.3	36.1	34.9	33.8	32.8	31.8	30.9	30.0	29.2	28.4	27.7	27.0	26.3
16.5	70.7	65.8	61.7	58.1	54.9	52.1	49.6	47.4	45.4	43.5	41.8	40.2	38.8	37.4	36.2	35.0	33.9	32.9	31.9	31.0	30.1	29.3	28.5	27.8	27.1	26.4
16.6	70.9	66.0	61.8	58.2	55.1	52.3	49.8	47.5	45.5	43.7	41.9	40.4	38.9	37.6	36.3	35.2	34.1	33.0	32.1	31.1	30.3	29.5	28.7	27.9	27.2	26.5
16.7	71.1	66.2	62.0	58.4	55.3	52.5	50.0	47.7	45.7	43.8	42.1	40.5	39.1	37.7	36.5	35.3	34.2	33.2	32.2	31.3	30.4	29.6	28.8	28.1	27.3	26.7
16.8	71.3	66.4	62.2	58.6	55.4	52.6	50.1	47.9	45.8	44.0	42.2	40.7	39.2	37.9	36.6	35.4	34.3	33.3	32.3	31.4	30.5	29.7	28.9	28.2	27.5	26.8
16.9	71.5	66.6	62.4	58.8	55.6	52.8	50.3	48.0	46.0	44.1	42.4	40.8	39.4	38.0	36.7	35.6	34.5	33.4	32.5	31.5	30.7	29.8	29.0	28.3	27.6	26.9
17.0	71.7	66.8	62.6	59.0	55.8	53.0	50.4	48.2	46.1	44.3	42.5	41.0	39.5	38.1	36.9	35.7	34.6	33.6	32.6	31.7	30.8	30.0	29.2	28.4	27.7	27.0
17.1	71.9	67.0	62.8	59.1	55.9	53.1	50.6	48.3	46.3	44.4	42.7	41.1	39.6	38.3	37.0	35.8	34.7	33.7	32.7	31.8	30.9	30.1	29.3	28.5	27.8	27.1
17.2	72.1	67.2	63.0	59.3	56.1	53.3	50.8	48.5	46.4	44.6	42.8	41.2	39.8	38.4	37.2	36.0	34.9	33.8	32.8	31.9	31.0	30.2	29.4	28.7	27.9	27.3
17.3	72.3	67.4	63.1	59.5	56.3	53.5	50.9	48.6	46.6	44.7	43.0	41.4	39.9	38.6	37.3	36.1	35.0	34.0	33.0	32.0	31.2	30.3	29.5	28.8	28.1	27.4
17.4	72.5	67.5	63.3	59.7	56.5	53.6	51.1	48.8	46.7	44.8	43.1	41.5	40.1	38.7	37.4	36.2	35.1	34.1	33.1	32.2	31.3	30.5	29.7	28.9	28.2	27.5
17.5	72.7	67.7	63.5	59.8	56.6	53.8	51.2	49.0	46.9	45.0	43.3	41.7	40.2	38.8	37.6	36.4	35.3	34.2	33.2	32.3	31.4	30.6	29.8	29.0	28.3	27.6 *
17.6	72.9	67.9	63.7	60.0	56.8	53.9	51.4	49.1	47.0	45.1	43.4	41.8	40.3	39.0	37.7	36.5	35.4	34.3	33.4	32.4	31.5	30.7	29.9	29.1	28.4	27.7
17.7	73.1	68.1	63.9	60.2	57.0	54.1	51.6	49.3	47.2	45.3	43.6	42.0	40.5	39.1	37.8	36.6	35.5	34.5	33.5	32.5	31.7	30.8	30.0	29.3	28.5	27.9
17.8	73.3	68.3	64.0	60.4	57.1	54.3	51.7	49.4	47.3	45.4	43.7	42.1	40.6	39.2	38.0	36.8	35.7	34.6	33.6	32.7	31.8	30.9	30.1	29.4	28.7	28.0
17.9	73.5	68.5	64.2	60.5	57.3	54.4	51.9	49.6	47.5	45.6	43.8	42.2	40.8	39.4	38.1	36.9	35.8	34.7	33.7	32.8	31.9	31.1	30.3	29.5	28.8	28.1
18.0	73.7	68.7	64.4	60.7	57.5	54.6	52.0	49.7	47.6	45.7	44.0	42.4	40.9	39.5	38.2	37.0	35.9	34.9	33.9	32.9	32.0	31.2	30.4	29.6	28.9	28.2
18.1	73.9	68.9	64.6	60.9	57.6	54.8	52.2	49.9	47.8	45.9	44.1	42.5	41.0	39.7	38.4	37.2	36.0	35.0	34.0	33.0	32.2	31.3	30.5	29.7	29.0	28.3
18.2	74.1	69.0	64.8	61.0	57.8	54.9	52.3	50.0	47.9	46.0	44.3	42.7	41.2	39.8	38.5	37.3	36.2	35.1	34.1	33.2	32.3	31.4	30.6	29.9	29.1	28.4
18.3	74.3	69.2	64.9	61.2	58.0	55.1	52.5	50.2	48.1	46.2	44.4	42.8	41.3	39.9	38.6	37.4	36.3	35.2	34.2	33.3	32.4	31.6	30.8	30.0	29.3	28.6
18.4	74.5	69.4	65.1	61.4	58.1	55.2	52.7	50.3	48.2	46.3	44.6	42.9	41.4	40.1	38.8	37.6	36.4	35.4	34.4	33.4	32.5	31.7	30.9	30.1	29.4	28.7
18.5	74.6	69.6	65.3	61.6	58.3	55.4	52.8	50.5	48.4	46.5	44.7	43.1	41.6	40.2	38.9	37.7	36.6	35.5	34.5	33.5	32.6	31.8	31.0	30.2	29.5	28.8
18.6	74.8	69.8	65.5	61.7	58.4	55.6	53.0	50.6	48.5	46.6	44.8	43.2	41.7	40.3	39.0	37.8	36.7	35.6	34.6	33.7	32.8	31.9	31.1	30.3	29.6	28.9
18.7	75.0	70.0	65.6	61.9	58.6	55.7	53.1	50.8	48.7	46.7	45.0	43.4	41.9	40.5	39.2	37.9	36.8	35.7	34.7	33.8	32.9	32.0	31.2	30.5	29.7	29.0
18.8	75.2	70.1	65.8	62.1	58.8	55.9	53.3	50.9	48.8	46.9	45.1	43.5	42.0	40.6	39.3	38.1	36.9	35.9	34.9	33.9	33.0	32.2	31.4	30.6	29.8	29.1
18.9	75.4	70.3	66.0	62.2	58.9	56.0	53.4	51.1	49.0	47.0	45.3	43.6	42.1	40.7	39.4	38.2	37.1	36.0	35.0	34.0	33.1	32.3	31.5	30.7	30.0	29.3

*Height = total tree height.

Table A9. White spruce average annual height growth in t-years above 1.3 m on different sites.

t*	Site index (m) at 50 years Bhage																						
(years)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Average annual height growth (m/year) in t-years above 1.3 m - Subregions 1 to 6 and 12 to 16																						
2.5	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	0.35	0.39	0.43	0.47	0.51	0.55	0.60	0.65
3.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.44	0.48	0.52	0.56
4.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.34	0.37	0.41	0.44	0.48	0.52
5.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.49
6.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.45	0.48
7.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.47
8.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.37	0.41	0.44	0.47
9.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
10.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
11.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.32	0.35	0.38	0.41	0.44	0.48
12.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.18	0.20	0.23	0.25	0.27	0.30	0.33	0.35	0.38	0.41	0.45	0.48
13.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.36	0.39	0.42	0.45	0.48
14.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.36	0.39	0.42	0.45	0.48
15.5	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.31	0.34	0.36	0.39	0.42	0.46	0.49
	Average annual height growth (m/year) in t-years above 1.3 m - Subregions 7 to 10																						
2.5	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.31	0.35	0.38	0.42	0.46	0.50	0.54	0.59	0.63	0.68	0.73
3.5	0.02	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.42	0.45	0.49	0.53	0.57	0.61
4.5	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.48	0.51	0.55
5.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.33	0.35	0.38	0.42	0.45	0.48	0.52
6.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.29	0.31	0.34	0.37	0.40	0.43	0.46	0.49
7.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.36	0.39	0.42	0.45	0.48
8.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47
9.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47
10.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.27	0.30	0.32	0.35	0.38	0.41	0.44	0.47
11.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47
12.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47
13.5	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47
14.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.31	0.33	0.36	0.38	0.41	0.44	0.47
15.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.17	0.19	0.22	0.24	0.26	0.28	0.31	0.33	0.36	0.39	0.41	0.44	0.47
	Average annual height growth (m/year) in t-years above 1.3 m - Subregion 11																						
2.5	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	0.22	0.24	0.27	0.30	0.33	0.37	0.40	0.44	0.48	0.52	0.57	0.61
3.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.42	0.45	0.49	0.53
4.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.50
5.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.29	0.31	0.34	0.37	0.41	0.44	0.48
6.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.34	0.37	0.40	0.43	0.47
7.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.31	0.33	0.36	0.39	0.43	0.46
8.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.36	0.39	0.43	0.46
9.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.34	0.36	0.40	0.43	0.46
10.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.31	0.34	0.37	0.40	0.43	0.46
11.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.17	0.19	0.22	0.24	0.26	0.29	0.31	0.34	0.37	0.40	0.43	0.47
12.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.34	0.37	0.40	0.44	0.47
13.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
14.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.16	0.18	0.20	0.23	0.25	0.27	0.30	0.32	0.35	0.38	0.41	0.44	0.48
15.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.36	0.39	0.42	0.45	0.48
	Average annual height growth (m/year) in t-years above 1.3 m - Provincial																						
2.5	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	0.35	0.39	0.43	0.47	0.51	0.55	0.60	0.65
3.5	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.44	0.48	0.52	0.56
4.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.34	0.37	0.41	0.44	0.48	0.52
5.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.49
6.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.45	0.48
7.5	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.47
8.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.37	0.41	0.44	0.47
9.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
10.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.47
11.5	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.30	0.32	0.35	0.38	0.41	0.44	0.48
12.5	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.18	0.20	0.23	0.25	0.27	0.30	0.33	0.35	0.38	0.41	0.45	0.48
13.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.33	0.36	0.39	0.42	0.45	0.48
14.5	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.36	0.39	0.42	0.45	0.48
15.5	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.31	0.34	0.36	0.39	0.42	0.46	0.49

*t = number of years above 1.3 m (t = number of pith nodes above 1.3 m - 0.5, or t = number of ring counts at 1.3 m - 0.5). For example, the 6th pith node above 1.3 m corresponds to a 5.5 year Bhage and a t = 5.5 years, a ring count of 10 at 1.3 m corresponds to a 9.5 year Bhage and a t = 9.5 years. See Figure 4 for an illustration.

Table A10. Growth intercept based site index prediction table for white spruce.

GI	Ring count at 1.3 m above ground																										
(m/yrs)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Predicted site index (m) at 50 years Bhage - Subregions 1 to 6 and 12 to 16																											
0.05	5.1	5.6	5.9	6.0	6.1	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7
0.10	8.1	8.9	9.4	9.6	9.7	9.7	9.7	9.6	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7
0.15	10.6	11.6	12.2	12.5	12.6	12.7	12.7	12.6	12.5	12.4	12.3	12.2	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.6	10.5	10.4
0.20	12.8	14.0	14.6	15.0	15.1	15.2	15.2	15.1	15.0	14.9	14.8	14.7	14.5	14.4	14.3	14.1	14.0	13.8	13.7	13.6	13.4	13.3	13.2	13.1	13.0	12.9
0.25	14.7	16.0	16.7	17.1	17.3	17.4	17.4	17.3	17.3	17.2	17.0	16.9	16.8	16.6	16.5	16.3	16.2	16.1	15.9	15.8	15.7	15.6	15.4	15.3	15.2	15.1
0.30	16.4	17.8	18.6	19.0	19.2	19.4	19.4	19.3	19.3	19.2	19.0	18.9	18.8	18.6	18.5	18.4	18.2	18.1	18.0	17.9	17.7	17.6	17.5	17.4	17.3	17.2
0.35	17.9	19.4	20.3	20.7	21.0	21.1	21.2	21.1	21.1	21.0	20.9	20.7	20.6	20.5	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4	19.3	19.2
0.40	19.3	20.9	21.8	22.3	22.6	22.8	22.8	22.8	22.7	22.7	22.6	22.5	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	21.2	21.2	21.1
0.45	20.6	22.3	23.2	23.8	24.1	24.3	24.3	24.3	24.3	24.2	24.2	24.1	23.9	23.8	23.7	23.6	23.5	23.4	23.3	23.3	23.2	23.1	23.0	23.0	22.9	22.9
0.50	21.8	23.6	24.6	25.2	25.5	25.7	25.8	25.8	25.8	25.7	25.6	25.6	25.5	25.4	25.3	25.2	25.1	25.0	25.0	24.9	24.8	24.8	24.7	24.7	24.7	24.6
0.55	23.0	24.8	25.8	26.5	26.8	27.0	27.1	27.2	27.2	27.1	27.1	27.0	26.9	26.8	26.8	26.7	26.6	26.6	26.5	26.4	26.4	26.4	26.4	26.3	26.3	26.3
0.60	24.0	25.9	27.0	27.7	28.1	28.3	28.4	28.5	28.5	28.5	28.4	28.4	28.3	28.2	28.2	28.1	28.1	28.0	28.0	28.0	27.9	27.9	27.9	27.9	27.9	28.0
0.65	25.1	27.0	28.2	28.9	29.3	29.5	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.6
0.70	26.0	28.1	29.2	30.0	30.4	30.7	30.8	30.9	31.0	31.0	30.9	30.9	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.9	30.9	31.0	31.1
0.75	27.0	29.1	30.3	31.0	31.5	31.8	32.0	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.2	32.2	32.2	32.3	32.4	32.5	32.6	32.7
0.80	27.9	30.0	31.3	32.0	32.5	32.9	33.0	33.2	33.2	33.3	33.3	33.3	33.3	33.3	33.3	33.4	33.4	33.4	33.5	33.5	33.6	33.7	33.8	33.9	34.1	34.2
0.85	28.7	30.9	32.2	33.0	33.5	33.9	34.1	34.2	34.3	34.4	34.4	34.4	34.5	34.5	34.5	34.6	34.6	34.7	34.8	34.9	35.0	35.1	35.2	35.3	35.5	35.7
0.90	29.6	31.8	33.1	34.0	34.5	34.9	35.1	35.3	35.4	35.4	35.5	35.6	35.6	35.7	35.7	35.8	35.8	35.9	36.0	36.1	36.3	36.4	36.6	36.8	36.9	37.2
0.95	30.4	32.7	34.0	34.9	35.5	35.8	36.1	36.3	36.4	36.5	36.6	36.6	36.7	36.8	36.8	36.9	37.0	37.1	37.3	37.4	37.6	37.7	37.9	38.1	38.4	38.6
1.00	31.1	33.5	34.9	35.8	36.4	36.8	37.0	37.2	37.4	37.5	37.6	37.7	37.8	37.9	38.0	38.1	38.2	38.3	38.5	38.7	38.8	39.0	39.3	39.5	39.8	40.0
Predicted site index (m) at 50 years Bhage - Subregions 7 to 10																											
0.05	4.5	5.0	5.3	5.5	5.7	5.7	5.8	5.8	5.7	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7
0.10	7.1	7.9	8.5	8.8	9.1	9.2	9.2	9.2	9.2	9.2	9.1	9.0	8.9	8.8	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7
0.15	9.3	10.4	11.1	11.6	11.9	12.0	12.1	12.1	12.1	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4
0.20	11.3	12.6	13.4	14.0	14.3	14.5	14.6	14.7	14.7	14.6	14.6	14.5	14.4	14.3	14.1	14.0	13.9	13.8	13.7	13.5	13.4	13.3	13.2	13.1	13.0	12.9
0.25	13.0	14.5	15.5	16.1	16.5	16.8	16.9	16.9	16.9	16.9	16.8	16.8	16.7	16.6	16.4	16.3	16.2	16.1	16.0	15.8	15.7	15.6	15.5	15.4	15.3	15.2
0.30	14.6	16.3	17.4	18.1	18.5	18.8	18.9	19.0	19.0	19.0	18.9	18.9	18.8	18.7	18.6	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.6	17.5	17.4	17.3
0.35	16.1	17.9	19.1	19.9	20.3	20.6	20.8	20.9	21.0	20.9	20.9	20.8	20.7	20.6	20.5	20.4	20.3	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4
0.40	17.5	19.5	20.7	21.5	22.0	22.4	22.6	22.7	22.7	22.7	22.7	22.7	22.6	22.5	22.4	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.6	21.5	21.4
0.45	18.8	20.9	22.2	23.1	23.6	24.0	24.2	24.4	24.4	24.5	24.4	24.4	24.3	24.2	24.2	24.1	24.0	23.9	23.8	23.7	23.6	23.6	23.5	23.4	23.4	23.3
0.50	20.0	22.2	23.6	24.5	25.2	25.6	25.8	26.0	26.0	26.1	26.1	26.0	26.0	25.9	25.9	25.8	25.7	25.6	25.6	25.5	25.4	25.4	25.3	25.3	25.2	25.2
0.55	21.2	23.5	25.0	25.9	26.6	27.0	27.3	27.5	27.6	27.6	27.6	27.6	27.5	27.5	27.4	27.3	27.3	27.2	27.2	27.1	27.1	27.0	27.0	27.0	27.0	27.0
0.60	22.3	24.7	26.2	27.3	27.9	28.4	28.7	28.9	29.0	29.1	29.1	29.1	29.1	29.1	29.0	29.0	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7
0.65	23.4	25.9	27.5	28.5	29.2	29.7	30.1	30.3	30.4	30.5	30.5	30.6	30.6	30.5	30.5	30.5	30.5	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
0.70	24.4	27.0	28.6	29.7	30.5	31.0	31.4	31.6	31.8	31.9	31.9	32.0	32.0	32.0	32.0	32.0	31.9	31.9	31.9	31.9	31.9	32.0	32.0	32.0	32.1	32.1
0.75	25.4	28.0	29.8	30.9	31.7	32.3	32.6	32.9	33.1	33.2	33.3	33.3	33.3	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.5	33.5	33.6	33.6	33.7	33.8
0.80	26.3	29.1	30.8	32.0	32.9	33.4	33.8	34.1	34.3	34.5	34.6	34.6	34.7	34.7	34.7	34.8	34.8	34.8	34.9	34.9	35.0	35.0	35.1	35.2	35.3	35.4
0.85	27.2	30.1	31.9	33.1	34.0	34.6	35.0	35.3	35.5	35.7	35.8	35.9	36.0	36.0	36.1	36.1	36.2	36.2	36.3	36.4	36.4	36.5	36.6	36.7	36.9	37.0
0.90	28.1	31.0	32.9	34.2	35.1	35.7	36.2	36.5	36.7	36.9	37.0	37.2	37.2	37.3	37.4	37.5	37.5	37.6	37.7	37.8	37.9	38.0	38.1	38.3	38.4	38.6
0.95	28.9	31.9	33.9	35.2	36.1	36.8	37.3	37.6	37.9	38.1	38.2	38.4	38.5	38.6	38.7	38.8	38.8	38.9	39.1	39.2	39.3	39.4	39.6	39.8	39.9	40.1
1.00	29.8	32.8	34.8	36.2	37.2	37.9	38.4	38.7	39.0	39.2	39.4	39.6	39.7	39.8	39.9	40.0	40.1	40.3	40.4	40.5	40.7	40.9	41.0	41.2	41.4	41.7
Predicted site index (m) at 50 years Bhage - Subregion 11																											
0.05	5.3	5.7	6.0	6.1	6.2	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.8
0.10	8.5	9.2	9.7	9.9	10.0	10.0	9.9	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8
0.15	11.1	12.1	12.6	12.9	13.0	13.0	13.0	12.9	12.8	12.7	12.6	12.4	12.3	12.1	12.0	11.8	11.7	11.6	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6
0.20	13.3	14.5	15.1	15.4	15.6	15.6	15.6	15.5	15.4	15.2	15.1	15.0	14.8	14.7	14.5	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.4	13.3	13.1	13.0
0.25	15.3	16.5	17.2	17.6	17.7	17.8	17.8	17.7	17.6	17.5	17.3	17.2	17.1	16.9	16.7	16.6	16.5	16.3	16.2	16.0	15.9	15.8	15.6	15.5	15.4	15.3
0.30	17.0	18.3	19.1	19.5	19.7	19.8	19.8	19.7	19.6	19.5	19.4	19.2	19.1	18.9	18.8	18.6	18.5	18.3	18.2	18.1	18.0	17.8	17.7	17.6	17.5	17.4
0.35	18.5	20.0	20.8	21.2	21.5	21.5	21.6	21.5	21.4	21.3	21.2	21.0	20.9	20.8	20.6	20.5	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4
0.40	20.0	21.5	22.3	22.8	23.1	23.2	23.2	23.2	23.1	23.0	22.9	22.7	22.6	22.5	22.4	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	21.3
0.45	21.3	22.9	23.8	24.3	24.5	24.7	24.7	24.7	24.6	24.5	24.4	24.3	24.2	24.1	24.0	23.9	23.8	23.7	23.6	23.5	23.4	23.3	23.2	23.2	23.1	23.1
0.50	22.5	24.2	25.1	25.6	25.9	26.1	26.1	26.1	26.1	26.0	25.9	25.8	25.7	25.6	25.5	25.4	25.3	25.2	25.1	25.1	25.0	25.0	24.9	24.9	24.8	24.8
0.55	23.6	25.4	26.4	26.9	27.2	27.4	27.5	27.5	27.4	27.4	27.3	27.2	27.1	27.0	27.0	26.9	26.8	26.7	26.7	26.6	26.6	26.5	26.5	26.5	26.5	26.5
0.60	24.7	26.5	27.5	28.1	28.5	28.7	28.7	28.8	28.7	28.7	28.6	28.6	28.5	28.4	28.3	28.3	28.2	28.2	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
0.65	25.7	27.6	28.6	29.3	29.6	29.8	29.9	30.0	30.0	29.9	29.9	29.8	29.8	29.7	29.7	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.7
0.70	26.7	28.6	29.7	30.4	30.7	31.0	31.1	31.2	31.2	31.2	31.1	31.1	31.0	31.0	31.0	30.9	30.9	30.9	30.9	30.9	30.9	31.0	31.0	31.1	31.1	31.2
0.75	27.6	29.6	30.7	31.4	31.8	32.1	32.2	32.3	32.3	32.3	32.3	32.3	32.3	32.2	32.2	32.2	32.2	32.2	32.2	32.3	32.3	32.4	32.4	32.5	32.6	32.7
0.80	28.5	30.5	31.7	32.4	32.8	33.1	33.3	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.5	33.5	33.5	33.6	33.7	33.7	33.8	34.0	34.1	34.2
0.85	29.4	31.4	32.6	33.4	33.8	34.1	34.3	34.4	34.5	34.5	34.5	34.5	34.6	34.6	34.6	34.6	34.7	34.7	34.8	34.9	35.0	35.1	35.2	35.4	35.5	35.7
0.90	30.2	32.3	33.5	34.3	34.8	35.1	35.3	35.4	35.5	35.5	35.6	35.6	35.7	35.7	35.7	35.8	35.9	35.9	36.0	36.1	36.3	36.4	36.6	36.7	36.9	37.1
0.95	31.0	33.1	34.4	35.2	35.7	36.0	36.2	36.4	36.5	36.6	36.6	36.7	36.7	36.8	36.9	36.9	37.0	37.1	37.3	37.4	37.5	37.7	37.9	38.1	38.3	38.6
1.00	31.7	33.9	35.2	36.1	36.6	36.9	37.2	37.3	37.5	37.5	37.6	37.7	37.8	37.9	37.9	38.1	38.2	38.3	38.4	38.6	38.8	39.0	39.2	39.4	39.7	40.0
Predicted site index (m) at 50 years Bhage - Provincial																											
0.05	5.1	5.6	5.9	6.0	6.1	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7
0.10	8.1	8.9	9.4	9.6	9.7	9.7	9.7	9.6	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7
0.15	10.6	11.6	12.2	12.5	12.6	12.7	12.7	12.6	12.5	12.4	12.3	12.2	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.6	10.5	10.4
0.20	12.8	14.0	14.6	15.0	15.1	15.2	15.2	15.1	15.0	14.9	14.8	14.7	14.5	14.4	14.3	14.1	14.0	13.8	13.7	13.6	13.4	13.3	13.2	13.1	13.0	12.9
0.25	14.7	16.0	16.7	17.1	17.3	17.4	17.4	17.3	17.3	17.2	17.0	16.9	16.8	16.6	16.5	16.3	16.2	16.1	15.9	15.8	15.7	15.6	15.4	15.3	15.2	15.1
0.30	16.4	17.8	18.6	19.0	19.2	19.4	19.4	19.3	19.3	19.2	19.0	18.9	18.8	18.6	18.5	18.4	18.2	18.1	18.0	17.9	17.7	17.6	17.5	17.4	17.3	17.2
0.35	17.9	19.4	20.3	20.7	21.0	21.1	21.2	21.1	21.1	21.0	20.9	20.7	20.6	20.5	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4	19.3	19.2
0.40	19.3	20.9	21.8	22.3	22.6	22.8	22.8	22.8	22.7	22.7	22.6	22.5	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	21.2	21.2	21.1
0.45	20.6	22.3	23.2	23.8	24.1	24.3	24.3	24.3	24.3	24.2	24.2	24.1	23.9	23.8	23.7	23.6	23.5	23.4	23.3	23.3	23.2	23.1	23.0	23.0	22.9	22.9
0.50	21.8	23.6	24.6	25.2	25.5	25.7	25.8	25.8	25.8	25.7	25.6	25.6	25.5	25.4	25.3	25.2	25.1	25.0	25.0	24.9	24.8	24.8	24.7	24.7	24.7	24.6
0.55	23.0	24.8	25.8	26.5	26.8	27.0	27.1	27.2	27.2	27.1	27.1	27.0	26.9	26.8	26.8	26.7	26.6	26.6	26.5	26.4	26.4	26.4	26.4	26.3	26.3	26.3
0.60	24.0	25.9	27.0	27.7	28.1	28.3	28.4	28.5	28.5	28.5	28.4	28.4	28.3	28.2	28.2	28.1	28.1	28.0	28.0	28.0	27.9	27.9	27.9	27.9	27.9	28.0
0.65	25.1	27.0	28.2	28.9	29.3	29.5	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.6
0.70	26.0	28.1	29.2	30.0	30.4	30.7	30.8	30.9	31.0	31.0	30.9	30.9	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.9	30.9	31.0	31.1
0.75	27.0	29.1	30.3	31.0	31.5	31.8	32.0	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.2	32.2	32.2	32.3	32.4	32.5	32.6	32.7
0.80	27.9	30.0	31.3	32.0	32.5	32.9	33.0	33.2	33.2	33.3	33.3	33.3	33.3	33.3	33.3	33.4	33.4	33.4	33.5	33.5	33.6	33.7	33.8	33.9	34.1	34.2
0.85	28.7	30.9	32.2	33.0	33.5	33.9	34.1	34.2	34.3	34.4	34.4	34.4	34.5	34.5	34.5	34.6	34.6	34.7	34.8	34.9	35.0	35.1	35.2	35.3	35.5	35.7
0.90	29.6	31.8	33.1	34.0	34.5	34.9	35.1	35.3	35.4	35.4	35.5	35.6	35.6	35.7	35.7	35.8	35.8	35.9	36.0	36.1	36.3	36.4	36.6	36.8	36.9	37.2
0.95	30.4	32.7	34.0	34.9	35.5	35.8	36.1	36.3	36.4	36.5	36.6	36.6	36.7	36.8	36.8	36.9	37.0	37.1	37.3	37.4	37.6	37.7	37.9	38.1	38.4	38.6
1.00	31.1	33.5	34.9	35.8	36.4	36.8	37.0	37.2	37.4	37.5	37.6	37.7	37.8	37.9	38.0	38.1	38.2	38.3	38.5	38.7	38.8	39.0	39.3	39.5	39.8	40.0

*GI = growth intercept, defined as the average annual height growth (m/year) in t-years above 1.3 m. GI = (total height - 1.3)/(ring count at breast height - 0.5).

APPENDIX 3.

Algebraical Expressions and Computing Algorithms for Estimating Site Index Given Height and Breast Height Age

This appendix shows algebraical expressions for calculating site index from model [1]. It also shows several iterative routines for calculating site index from other height and site index models.

Equation [1] can be written as:

$$[A1] \quad H = 1.3+(SI-1.3)\cdot\left(\frac{1+b_0(SI-1.3)+\exp(b_1)\cdot(50+b_3)^{b_2}\cdot(SI-1.3)^{-1}}{1+b_0(SI-1.3)+\exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(SI-1.3)^{-1}}\right)$$

which can be rearranged into the following form:

$$[A2] \quad b_0(SI-1.3)^3 + [1-b_0(H-1.3)]\cdot(SI-1.3)^2 + [\exp(b_1)\cdot(50+b_3)^{b_2}-(H-1.3)]\cdot(SI-1.3) - \exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(H-1.3) = 0$$

Equation [A2] can be written in the following cubic form:

$$[A3] \quad ax^3+bx^2+cx+d = 0$$

where:

$$[A4] \quad x = SI-1.3$$
$$[A5] \quad a = b_0$$
$$[A6] \quad b = 1-b_0(H-1.3)$$
$$[A7] \quad c = \exp(b_1)\cdot(50+b_3)^{b_2}-(H-1.3)$$
$$[A8] \quad d = -\exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(H-1.3)$$

To solve x in [A3], begin by defining:

$$[A9] \quad x = y-\frac{b}{3a}$$

Substitute [A9] into [A3] gives the following equation:

$$[A10] \quad y^3+3py+q = 0$$

where:

$$[A11] \quad p = \frac{3ac-b^2}{9a^2}$$

$$[A12] \quad q = \frac{2b^3-9abc+27a^2d}{27a^3}$$

The discriminant (K) of equation [A10] is:

$$[A13] \quad K = q^2+4p^3$$

Two different scenarios occur depending on the calculated K value in [A13]:

Scenario - I. If the discriminant K in [A13] is positive ($K>0$), a real solution for y in [A10] can be expressed by:

[A14] $$y = \sqrt[3]{m_1} + \sqrt[3]{m_2}$$

where:

[A15] $$m_1 = \frac{-q+\sqrt{q^2+4p^3}}{2} \qquad m_2 = \frac{-q-\sqrt{q^2+4p^3}}{2}$$

Two complex solutions for y in [A10] can be ignored because they are associated with complex numbers. Having the calculated y value, site index value is calculated by (via [A4]):

[A16] $$SI = x+1.3 = y-\frac{b}{3a}+1.3$$

where a, b, x and y are expressed in [A5], [A6], [A9] and [A14], respectively.

Scenario - II. If the discriminant K is zero or negative ($K\leq 0$), there are three real solutions for y in [A10]:

[A17] $$y_1 = 2Z^{\frac{1}{3}}\cos\frac{\theta}{3} \qquad y_2 = 2Z^{\frac{1}{3}}\cos\frac{\theta+2\pi}{3} \qquad y_3 = 2Z^{\frac{1}{3}}\cos\frac{\theta+4\pi}{3}$$

where:

[A18] $$Z = \sqrt{-p^3} \qquad \theta = \cos^{-1}\frac{-q}{2Z}$$

Consequently, the three site index solutions can be written as follows:

[A19] $$SI_1 = x_1+1.3 = y_1-\frac{b}{3a}+1.3 \qquad SI_2 = x_2+1.3 = y_2-\frac{b}{3a}+1.3 \qquad SI_3 = x_3+1.3 = y_3-\frac{b}{3a}+1.3$$

Based on the coefficients shown in Table 3 and the data ranges for white spruce, it was found that in most circumstances, the discriminant K in equation [A13] was positive ($K>0$). The real solution presented in [A16] of *Scenario* - I is appropriate when $K>0$. In the cases where $K\leq 0$, it was found that the positive solution SI_1 in [A19] of *Scenario* - II is appropriate.

The above computation for site index given height and Bhage is straightforward in principle. It involves solving x from the cubic polynomial: $ax^3+bx^2+cx+d=0$. However, hand calculations from the given formulas are still clumsy. Initially, the mathematical package MAPLE was used to draw "solution graphs" and find the exact solution. But because MAPLE requires additional resources and is not readily accessible to most foresters (it resides in the Departments of Mathematics and Computing Science at University of Alberta), two SAS algorithms are provided to perform actual computations. One uses the algebraical formulas shown above (Algorithm-I). The other is an iterative procedure (Algorithm II). The iterative procedure is more efficient in terms of computations. Therefore, whenever possible, Algorithm-II should be implemented.

Algorithm-I (site index predicted by algebraically rearranging [1]):

```
data vv10;

*An example tree with its total height and breast height age known;

  h=20; bhage=80;

  B0= 0.044435; B1= 11.381718; B2= -1.944325; B3= 6.728764;

  a=b0;
  b=1-b0*(h-1.3);
  c= exp(b1)*(50+b3)**b2 - (h-1.3);
  d=-exp(b1)*(bhage+b3)**b2*(h-1.3);
```

```
  p=(3*a*c-b**2)/(9*a**2);
  q=(2*b**3-9*a*b*c+27*a**2*d)/(27*a**3);

  k=4*p**3+q**2;

if k<=0 then do;
    z=sqrt(-p**3);
    theta=arcos(-q/(2*z));

    y1=2*z**(1/3)*cos((theta              )/3);
    y2=2*z**(1/3)*cos((theta+2*3.141592654)/3);
    y3=2*z**(1/3)*cos((theta+4*3.141592654)/3);

    x1=y1-b/(3*a);
    x2=y2-b/(3*a);
    x3=y3-b/(3*a);

    sip1=x1+1.3;
    sip2=x2+1.3;
    sip3=x3+1.3;
end;

if k>0 then do;
    m1=(-q + sqrt(q**2 + 4*p**3))/2;
    m2=(-q - sqrt(q**2 + 4*p**3))/2;

    if m1<0  then m11=-(-m1)**(1/3);
    if m1>=0 then m11= ( m1)**(1/3);
    if m2<0  then m21=-(-m2)**(1/3);
    if m2>=0 then m21= ( m2)**(1/3);

    y=m11+m21;
    x=y-b/(3*a);
    si =x+1.3;
end;

keep bhage h k sip1 sip2 sip3 si;
proc print;
RUN;

*Here are the printed results for the example;
```

OBS	BHAGE	H	K	SIP1	SIP2	SIP3	SI
1	80	20	51193990.64	.	.	.	13.1261

Algorithm-II (site index predicted by iterations):

```
data vv10;

*An example tree with its total height and breast height age known;

  h=20; bhage=80;
  B0= 0.044435; B1= 11.381718; B2= -1.944325; B3= 6.728764;

  si0=10;

do until(abs(si0-si1)<0.00000001);

   x1= (1+b0*(si0-1.3)+exp(b1 +b2*log(bhage+b3) -   log(si0-1.3)))  ;
   x2= (1+b0*(si0-1.3)+exp(b1 +b2*log(50   +b3) -   log(si0-1.3)))  ;

    si1=1.3+(h-1.3)*x1/x2;
    si0=(si0+si1)/2;

end;

    si=si1;

keep bhage h SI;
proc print;
RUN;

*Here are the printed results for the example;
```

OBS	BHAGE	H	SI
1	80	20	13.1261

As expected, calculated site index values from Algorithm-I and Algorithm-II are identical (SI = 13.1261 m). The logic embedded in Algorithm-II has been applied to other height and site index models (Huang 1994), and is applicable to most height and site index models (or other types

of models) that require iterations. For instance, to solve SI from equation [3] in Table 1, the above x_1 and x_2 expressions are replaced by:

```
x1= (1+exp(b1 +b2*log(bhage+b3) +b4*log(si0-1.3)))  ;
x2= (1+exp(b1 +b2*log(50   +b3) +b4*log(si0-1.3)))  ;
```

Similarly, to solve site index from the constrained Monserud (1984)'s function (see Alberta Forest Service 1985), the x_1 and x_2 become:

```
x1= (1+exp(b1 +b2*log(bhage) +b3*log(si0-1.3)))  ;
x2= (1+exp(b1 +b2*log(50   ) +b3*log(si0-1.3)))  ;
```

Algorithms for site index prediction from other height and site index models can be written in a similar manner. Even in cases where iterations are unnecessary, Algorithm-II can still be used to achieve computation efficiency. As an example, site index can be solved algebraically from model [2] without using an iterative routine, by rearranging [2] to:

$$[A20] \qquad H = 1.3+(SI-1.3)\cdot\left(\frac{1+\exp(b_1)\cdot(50+b_3)^{b_2}/(SI-1.3)}{1+\exp(b_1)\cdot(Bhage+b_3)^{b_2}/(SI-1.3)}\right)$$

Equation [A20] can be rearranged further to a quadratic polynomial in the form of $ax^2+bx+c = 0$:

$$[A21] \qquad (SI-1.3)^2 + [\exp(b_1)\cdot(50+b_3)^{b_2}-(H-1.3)]\cdot(SI-1.3) - \exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(H-1.3) = 0$$

The solution for site index SI in [A21] is:

$$[A22] \qquad SI = 1.3+\frac{-b+\sqrt{b^2-4c}}{2} \qquad where: \quad b = \exp(b_1)\cdot(50+b_3)^{b_2}-H+1.3, \quad c = -\exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(H-1.3)$$

By defining x_1 and x_2 in the following forms, Algorithm-II can be used to increase the efficiency of site index computation from [2]:

```
x1= (1+ exp(b1 +b2*log(bhage+b3) -   log(si0-1.3)))  ;
x2= (1+ exp(b1 +b2*log(50   +b3) -   log(si0-1.3)))  ;
```

For model [4] in Table 1, the x_1 and x_2 expressions can be defined as:

```
x1= (1+ exp(b1 +b2*log(bhage+b3) +b4*log(bhage+c)**2 -  log(si0-1.3)))  ;
x2= (1+ exp(b1 +b2*log(50   +b3) +b4*log(50   +c)**2 -  log(si0-1.3)))  ;
```

Site index can also be solved algebraically from [4], by rearranging [4] to (note that: $\exp(a\ln x) = x^a$ and $\exp(a\ln^2 x) = x^{a\ln(x)}$):

$$[A23] \qquad H = 1.3+(SI-1.3)\cdot\left(\frac{1+\exp(b_1)\cdot(50+b_3)^{b_2}\cdot(50+c)^{b_4\ln(50+c)}/(SI-1.3)}{1+\exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(Bhage+c)^{b_4\ln(Bhage+c)}/(SI-1.3)}\right)$$

Equation [A23] can be rearranged further to a quadratic polynomial in the form of $ax^2+bx+c = 0$:

$$[A24] \qquad (SI-1.3)^2 + [\exp(b_1)\cdot(50+b_3)^{b_2}\cdot(50+c)^{b_4\ln(50+c)}-(H-1.3)]\cdot(SI-1.3) - \exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(Bhage+c)^{b_4\ln(Bhage+c)}\cdot(H-1.3) = 0$$

The solution for SI in equation [A24] is:

$$[A25] \qquad SI = 1.3+\frac{-b+\sqrt{b^2-4c}}{2} \qquad where: \quad b = \exp(b_1)\cdot(50+b_3)^{b_2}\cdot(50+c)^{b_4\ln(50+c)}-H+1.3, \quad c = -\exp(b_1)\cdot(Bhage+b_3)^{b_2}\cdot(Bhage+c)^{b_4\ln(Bhage+c)}\cdot(H-1.3)$$

For every model shown in Table 1 that requires numerical procedures for site index prediction, an iterative routine was written (in SAS) and is available to users if requested.

Forest Management Research Note:

No. 1 - A versatile height and site index model for jack pine in Alberta
No. 2 - Height growth and site index curves for young and mature balsam fir in Alberta
No. 3 - A compatible height and site index model for young and mature Douglas-fir in Alberta
No. 4 - Compatible height growth and site index curves for young and mature balsam poplar in Alberta
No. 5 - Development of a subregion-based compatible height-site index-age model for black spruce in Alberta
No. 6 - Development of a subregion-based compatible height-site index-age model for young and mature lodgepole pine in Alberta
No. 7 - A subregion-based compatible height and site index model for young and mature white spruce in Alberta

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