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Ministry of Forests and Range — Revenue Branch

MEMORANDUM

File: 280-30

June 13, 2007

BY EMAIL

To: Regional Executive Directors

From: Bill Howard
Director
Revenue Branch

Re: Amendment No. 1 – CGNF *Compilation Standards Manual*

I hereby approve Amendment No. 1 to the CGNF *Compilation Standards Manual*, and attach a copy for your use.

The following Appendices have been amended:

Appendix 1 – Section 3.10	The Length, Gross volume corrected, Decay volume corrected and Breakage volume uncorrected totals were corrected.
Appendix 2	Allowable maximum top diameters and minimum net factors were corrected
Appendix 5	The Spruce high grade was updated to reflect the last two years scale results.

This amendment is effective the date of this memo. Further amendments or revisions to this manual require my approval.

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Bill Howard
Director
Revenue Branch

Attachment

pc: Els Armstrong, Cruising Co-ordinator, Southern Interior Forest Region
Ron Alton, Cruising Co-ordinator, Northern Interior Forest Region
Bruce Markstrom, Cruising and Waste Co-ordinator, Coast Forest Region

Amendments

Amendment No. 1 - Effective June 15, 2007

For your convenience the current amendment updates appear in red text. All changed graphics are indicated with a red arrow. Two arrows represents text removed.

Section	Description
Appendix 1, section 3.10	The Length, Gross Volume Corr, Decay Volume Corr and Breakage Volume Uncorr totals were corrected.
Appendix 2 Fir	H grade, Max Top Dia changed to 50 I grade, Max Top Dia changed to 50
Appendix 2 Cedar	D grade, Max Top Dia changed to 120. I grade, Max Top Dia changed to 50.
Appendix 2 Hemlock	I grade, Min Net Factor changed to 50.
Appendix 2 Balsam	I grade, Min Net Factor changed to 50.
Appendix 2 Spruce	I grade, Max Top Dia changed to 50.
Appendix 2 White Pine	I grade, Max Top Dia changed to 50.
Appendix 2 Lodgepole Pine	H grade, Max Top Dia changed to 50. I grade, Max Top Dia changed to 50.
Appendix 2 Ponderosa Pine	H grade, Max Top Dia changed to 50. I grade, Max Top Dia changed to 50.
Appendix 2 Larch	H grade, Max Top Dia changed to 50. I grade, Max Top Dia changed to 50.
Appendix 2 White bark Pine	H grade, Max Top Dia changed to 50. I grade, Max Top Dia changed to 50.
Appendix 5	Spruce high grade table updated to show the last two years scale results.

NVAF corrections are found in Appendix 4.

NVAF corrected Net factor.

= NVAF correction ratio * tree decay factor$^{\text{NVAR correction}}$

= 0.860 * 78.4% $^{1.000}$

= 67.4%

3.7 Calculate the adjusted decay factor by the NVAF factor. This is the net corrected volume for all logs except Z grade logs. For Z grade logs, the $VmBDc_i$ is the waste volume.

$$VmBDc_i = VmBc_i \times Fd_i \times \frac{Fdc}{Fd}$$

Gross vol corrected minus breakage and decay volume =.

Gross vol corrected minus breakage volume * NF%log4 * corrected.

Decay factor/ cruiser's estimate of net %.

= 0.4531 m^3 * 0% * 67.4% / 78.4%.

= 0.0000 m^3

3.8 Calculate the decay volume:

$$D_i = VmBc_i \times (1 - (Fd_i \times \frac{Fdc}{Fd}))$$

Decay corrected volume = Gross vol corrected minus brk vol *

(1- (NF% log4 * corr Decay factor / cruiser's estimate of net %))

= 0.4531 m^3 * (1 – (0% * 67.4%/ 78.4%**)**

= 0.4531 m^3 * (1.0000)

= 0.4531 m^3

Note: Data has been rounded for summary purposes. The final value is calculated based on intermediate significant figures (see Appendix 16 of the *Cruise Compilation Manual*).

3.9 Calculate the waste volume. (Only logs in the tree with "Z" grade).

Since log 4 is an N grade, there is no waste volume from log 4.

$Vw_i = VmBDc_i$

$Vn_i = 0$

otherwise:

$Vw_i = 0$

$Vn_i = VmBDc_i$

If the log is a Z grade, the VmBDc = waste volume.

If the log is any other grade, except N then the VmBDc = net volume.

3.10 Calculate the net volume (gross volume corrected – DWB volumes).

$$Vn = \sum_{i=1}^{n} Vn_i$$

Log Position	Grade	Length (m)	Gross Volume (m^3)	Gross Volume Corr. (m^3)	Decay Volume Corr. (m^3)	Waste Volume Corr. (m^3)	Breakage Volume Uncorr. (m^3)	Net Volume Corr. (m^3)
1	N	1	0.4796	0.4136	0.3896		0.0240	0.0000
2	H	8	2.5357	2.1864	0.3789		0.1268	1.6827
3	I	7	1.6449	1.4183	0.2100		0.0822	1.1260
4	N	3	0.5578	0.4180	0.4531		0.0279	0.0000
5	U	11	1.1214	0.9669	0.2137		0.0561	0.6972
6	N	2.27	0.0612	0.0528	0.0497		0.0031	0.0000
Totals		32.27	6.4007	5.4560	1.6950		0.3201	3.5059

Appendix 2 Log Grade Validations

Please see Section 2.2.3 for examples of errors and warnings associated with the tables in Appendix 2.

Douglas-fir (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
F	B	5	60	9999	80
F	C	5	38	9999	80
F	D	5	76	9999	75
F	F	5	60	9999	75
F	H	5	38	50	75
F	H	5	50	9999	50
F	I	5	38	50	75
F	I	5	50	9999	50
F	J	5	15	38	75
F	U	5	38	9999	50
F	U	5	15	38	67
F	U	5	10	15	75
F	X	5	10	9999	33
F	Y	3	10	9999	10
F	N	1	10	9999	0
F	Z	1	10	9999	0

Cedar (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
C	D	5	60	120	75
C	D	5	120	9999	67
C	F	5	50	9999	75
C	H	5	38	9999	75
C	I	5	38	50	75
C	I	10	50	9999	50
C	K	4	50	9999	50
C	L	4	38	9999	50
C	M	4	38	9999	50
C	J	5	15	38	75
C	U	5	38	9999	50
C	U	5	15	38	67
C	U	5	10	15	75
C	X	5	10	9999	33
C	Y	3	10	9999	10
C	N	1	10	9999	0
C	Z	1	10	9999	0

Hemlock (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
H	D	5	66	9999	75
H	F	5	50	9999	75
H	H	5	38	9999	75
H	I	5	38	9999	50
H	J	5	15	38	75
H	U	5	38	9999	50
H	U	5	15	38	67
H	U	5	10	15	75
H	X	5	10	9999	33
H	Y	3	10	9999	10
H	N	1	10	9999	0
H	Z	1	10	9999	0

Balsam (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
B	D	5	66	9999	75
B	F	5	50	9999	75
B	H	5	38	9999	75
B	I	5	38	9999	50
B	J	5	15	38	75
B	U	5	38	9999	50
B	U	5	15	38	67
B	U	5	10	15	75
B	X	5	10	9999	33
B	Y	3	10	9999	10
B	N	1	10	9999	0
B	Z	1	10	9999	0

Spruce (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
S	F	5	76	9999	75
S	G	5	60	9999	75
S	H	5	38	9999	75
S	I	5	38	50	75
S	I	5	50	9999	50
S	J	5	15	38	75
S	U	5	38	9999	50
S	U	5	15	38	67
S	U	5	10	15	75
S	X	5	10	9999	33
S	Y	3	10	9999	10
S	N	1	10	9999	0
S	Z	1	10	9999	0

Cypress (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
CY	D	5	60	9999	75
CY	F	5	50	9999	75
CY	H	5	38	9999	50
CY	I	5	38	9999	50
CY	J	5	15	38	75
CY	U	5	38	9999	50
CY	U	5	15	38	67
CY	U	5	10	15	75
CY	X	5	10	9999	33
CY	Y	3	10	9999	10
CY	N	1	10	9999	0
CY	Z	1	10	9999	0

White Pine (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
PW	D	5	76	9999	75
PW	F	5	60	9999	75
PW	H	5	38	9999	75
PW	H	5	50	9999	50
PW	I	5	38	50	75
PW	I	5	50	9999	50
PW	J	5	15	38	75
PW	U	5	38	9999	50
PW	U	5	15	38	67
PW	U	5	10	15	75
PW	X	5	10	9999	33
PW	Y	3	10	9999	10
PW	N	1	10	9999	0
PW	Z	1	10	9999	0

Lodgepole Pine (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
PL	D	5	76	9999	75
PL	F	5	60	9999	75
PL	H	5	38	50	75
PL	H	5	50	9999	50
PL	I	5	38	50	75
PL	I	5	50	9999	50
PL	J	5	15	38	75
PL	U	5	38	9999	50
PL	U	5	15	38	67
PL	U	5	10	15	75
PL	X	5	10	9999	33
PL	Y	3	10	9999	10
PL	N	1	10	9999	0
PL	Z	1	10	9999	0

Ponderosa Pine (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
PY	D	5	76	9999	75
PY	F	5	60	9999	75
PY	H	5	38	50	75
PY	H	5	50	9999	50
PY	I	5	38	50	75
PY	I	5	50	9999	50
PY	J	5	15	38	75
PY	U	5	38	9999	50
PY	U	5	15	38	67
PY	U	5	10	15	75
PY	X	5	10	9999	33
PY	Y	3	10	9999	10
PY	N	1	10	9999	0
PY	Z	1	10	9999	0

Larch (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
L	D	5	76	9999	75
L	F	5	60	9999	75
L	H	5	38	50	75
L	H	5	50	9999	50
L	I	5	38	50	75
L	I	5	50	9999	50
L	J	5	15	38	75
L	U	5	38	9999	50
L	U	5	15	38	67
L	U	5	10	15	75
L	X	5	10	9999	33
L	Y	3	10	9999	10
L	N	1	10	9999	0
L	Z	1	10	9999	0

Aspen (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
AT	I	5	25	9999	50
AT	U	5	25	9999	50
AT	U	5	15	25	67
AT	U	5	10	15	75
AT	Y	3	10	9999	10
AT	N	1	10	9999	0
AT	Z	1	10	9999	0

Whitebark Pine (except heli-log = 4m):

Species	Grade	Min Log Len (m)	Min Top Dia (cm)	Max Top Dia (cm)	Min Net Factor (%)
PA	D	5	76	9999	75
PA	F	5	60	9999	75
PA	H	5	38	50	75
PA	H	5	50	9999	50
PA	I	5	38	50	75
PA	I	5	50	9999	50
PA	J	5	15	38	75
PA	U	5	38	9999	50
PA	U	5	15	38	67
PA	U	5	10	15	75
PA	X	3	10	9999	33
PA	Y	3	10	9999	10
PA	N	1	10	9999	0
PA	Z	1	10	9999	0

Species	Live/Dead	Age Class	Taper Ratio	NVAF Ratio	NVAF Power
PY	L	ALL	1	1	1
L	D	ALL	0.855	0.86	1
L	L	ALL	1	1	1
AC	D	ALL	0.855	0.86	1
AC	L	ALL	1	1	1
D	D	ALL	0.855	0.86	1
D	L	ALL	0.967	1	1
MB	D	ALL	0.855	0.86	1
MB	L	ALL	1	1	1
E	D	ALL	0.855	0.86	1
E	L	ALL	1	1	1
AT	D	ALL	0.855	0.86	1
AT	L	ALL	1	1	1
PA	D	ALL	0.855	0.86	1
PA	L	ALL	1	1	1
HM	D	ALL	0.855	0.86	1
HM	L	2nd Growth	0.984	1	1
HM	L	MAT	0.9	0.945	1

Appendix 5 Spruce High Grade Table

Percentages within Spruce Grades

District	**G**	**F**
	E	D
Campbell River	**100** 00	**67** 33
Chilliwack	**100** 00	**100** 00
South Island	**75** 25	**40** 60
North Coast	**62** 38	**50** 50
North Island – Central Coast	**80** 20	**50** 50
Queen Charlotte	**71** 29	**50** 50
Squamish	**100** 00	**100** 00
Sunshine Coast	**100** 00	**100** 00

Source of the table is the Coast Grade Distribution Report 2005-04 to 2007-03.

Example:

In the South Island District when a log is recorded as G, 75% of the log volume will be deemed to be G grade and 25% will be deemed to be E grade.