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MEMORANDUM

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July 15, 2010

BY EMAIL

To: Regional Executive Directors

From: Murray Stech, Director, Pricing Branch

Re: ***Cruise Compilation Manual Amendment #1***

The purpose of this memo is to inform you that Amendment #1 for the *Cruise Compilation Manual* becomes effective on July 15, 2010.

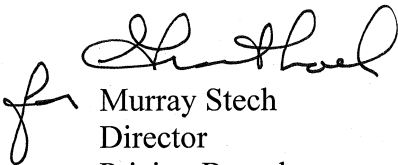


The amendment will be available on the internet at the following link:

<http://www.for.gov.bc.ca/hva/manuals/cruise compilation.htm>

Please find a copy of the *Cruise Compilation Manual* Highlights attached.

Comments or questions about this manual should be referred to Mark Koepke, Cruising Analyst, Pricing Branch at (250) 483-5923 or Don Rorison, Cruising Projects Specialist, Pricing Branch (250) 356-7674.



Murray Stech
Director
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Attachment

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Highlights

2010 Cruise Compilation Manual Amendment No. 1 Changes

The *Cruise Compilation Manual* is available on the Internet at:

<http://www.for.gov.bc.ca/hva/manuals/cruise compilation.htm>

The *Call Grade Net Factor Compilation Standards for the Coast Forest Region* are available on the Internet at:

<http://www.for.gov.bc.ca/hva/manuals/cgnf compilation.htm>

Section	Description
All Reports	The 2010 version number will reported 2010.00 or 2010.00.* on all of the cruise compilation reports.
Valid Compilation Versions	The valid compilation versions web site will be updated to indicate that the three compilation programs approved to compile for MFR appraisal purposes are tested and approved: http://www.for.gov.bc.ca/hva/manuals/validcompversions.htm
14.1.2.1 – Coast Appraisal Summary Report	The <i>Coast Appraisal Summary Report</i> includes the net merchantable volume and the net merchantable volume per hectare to 3 decimal places for each species, conifer and total. The net merchantable volume and volume per hectare will be reported for all trees, live trees and dead potential trees.
Figure 14.1	Replace the Coast Appraisal Summary – Sample Listing.
14.3.2.1 – Interior Appraisal Summary Report	The <i>Interior Appraisal Summary Report</i> includes the net merchantable volume and net merchantable volume per hectare to 3 decimal places for each species, conifer and total. The net merchantable volume and volume per hectare will be reported for all trees, live trees and dead potential trees.
14.3.2.5 – Interior Appraisal Summary Report	The <i>Interior Appraisal Summary Report</i> includes the net merchantable volume of red plus grey attack lodgepole pine net merchantable volume for each cut-block in the cutting authority. Report the percentages as a percent of the coniferous net merchantable volume.
Figure 14.2	Replace the Interior Appraisal Summary – Sample Listing.
Appendix A.9.11	The coast spruce high grade historic grade percentages are rolled up for the two fiscal years 2009/10 for use in the grade algorithm for loss factor cruises.
Appendix A.9.11.1	The coast cedar shingle grade historic grade percentages are rolled up for the two fiscal years 2009/10 for use in the grade algorithm for loss factor cruises.

12 Volume Summaries

12.1 Volume Summary - Overview	12-2
12.1.1 List of Reports.....	12-2
12.2 Header Information - All Reports	12-3
12.3 Detail Information.....	12-6
12.3.1 Gross Merchantable Volume	12-11
12.3.2 Net Merchantable Volume.....	12-15
12.3.3 Net Merchantable Volume per Hectare	12-15
12.3.4 Percent Distribution per Hectare.....	12-15
12.3.5 Percent Decay – Gross	12-15
12.3.6 Percent Waste - Gross	12-16
12.3.7 Percent Waste (Billing) - Net.....	12-16
12.3.8 Percent Total Cull - Gross.....	12-16
12.3.9 Stems per Hectare	12-17
12.3.10 Snags per Hectare	12-17
12.3.11 Average DBH - Stems	12-18
12.3.12 Average DBH – Snags	12-18
12.3.13 Merchantable Volume per Tree - Gross.....	12-18
12.3.14 Merchantable Volume per Tree - Net	12-19
12.3.15 Average Weighted Total Height	12-19
12.3.16 Average Weighted Merchantable Height.....	12-21
12.3.17 Net Merchantable Volume per Log	12-22
12.3.18 Average Number of Logs per Tree	12-24
12.3.19 Percent Immature - Coast Only.....	12-24
12.3.20 Percent Net Merch - Small Logs.....	12-28
12.3.21 Block Slope.....	12-28
12.4 Lumber Information – Interior Only.....	12-31
12.4.1 Percent Net Merch - Stud Logs.....	12-31
12.4.2 Percent Net Merch - Small Logs.....	12-31
12.4.3 Percent Net Merch - Large Logs.....	12-31
12.4.4 Average LRF - All Logs (bd ft/m ³).....	12-32
12.5 Statistical Summary	12-34
12.5.1 Number of Measured Plots Used	12-34
12.5.2 Type of Plots	12-34
12.5.3 Number of Measured Potential Trees	12-34
12.5.4 Number of Plots per Hectare - Cutting Permit Only.....	12-35
12.5.5 Number of Trees per Plot - Cutting Permit and Timber Type Only	12-35
12.5.6 % Confidence Interval for Volume	12-35
12.6 Volume Summary - Sample Listings.....	12-37

13 Harvesting Method Summary - Overview

13.1 Header Information.....	13-3
13.2 Detail Information Variable Definitions.....	13-4

13.2.1	Gross Merchantable Volume	13-7
13.2.2	Net Merchantable Volume.....	13-9
13.2.3	Net Merchantable Volume per Hectare	13-9
13.2.4	Net Merchantable Volume per Hectare - Live.....	13-9
13.2.5	Net Merchantable Volume per Hectare - Dead Potential	13-10
13.2.6	Net Merchantable Volume per Tree	13-10
13.2.7	Net Merchantable Volume per Log	13-10
13.2.8	Percent Decay - Gross.....	13-12
13.2.9	Percent Waste (Billing) - Net.....	13-13
13.2.10	Percent Total Cull - Gross.....	13-13
13.2.11	Percent Useless Trees	13-13
13.2.12	Percent Blowdown Volume - Net	13-14
13.2.13	Percent Fire Damage Volume - Net.....	13-17
13.2.14	Percent Heavy Fire Damage Volume – Net.....	13-18
13.2.15	Percent Insect Damage Volume – Net.....	13-19
13.2.16	Percent Second Growth Volume – Net.....	13-19
13.2.17	Average Slope Percent.....	13-20
13.2.18	Algorithm Grade Percent	13-23
13.3	Lumber Information - Interior Only	13-24
13.3.1	Percent Stud Log Volume - Net.....	13-24
13.3.2	Percent Net Merch – Small Logs	13-24
13.3.3	Percent Net Merch – Large Logs	13-24
13.3.4	Average LRF – All Logs.....	13-25

14 Appraisal Summaries

14.1	Appraisal Summary - Coast.....	14-2
14.1.1	Header information	14-2
14.1.2	Detail Information.....	14-2
14.1.2.1	Species Grade Percent Table	14-2
14.1.2.2	Harvesting Method Parameter Table	14-3
14.1.2.3	Cutting Permit Parameters	14-4
14.1.2.4	All Method Parameters	14-5
14.2	Coast Appraisal Summary - Sample Listing.....	14-7
14.3	Appraisal Summary - Interior	14-8
14.3.1	Header Information.....	14-8
14.3.2	Detail Information.....	14-8
14.3.2.1	Species Parameter Table	14-8
14.3.2.2	Harvesting Method Parameter Table	14-9
14.3.2.4	Appraisal Summary Page – Insect Damage Table.....	14-11
14.3.2.5	Appraisal Summary Page – Lodgepole Pine Insect Damage by Block	14-12
14.4	Interior Appraisal Summary – Sample Listing	14-13

List of Figures

Figure 2.1a Input File (Page 1).	2-3
Figure 2.1b Input File (Page 2).	2-4
Figure 2.2a Sample Map Area Statement - Front Side.	2-5
Figure 2.2b Sample Map Area Statement - Reverse Side.	2-6
Figure 2.3a Interior Cruise Tally Sheet - Front Side.	2-21
Figure 2.3b Cruise Tally Sheet - Reverse Side.	2-22
Figure 2.4 Report 001A.	2-30
Figure 3.1 Cruise Compilation Sequence.	3-3
Figure 3.2 Log Volume Calculation.	3-8
Figure 3.3 Input Data Relationships.	3-9
Figure 3.4 Report 004b.	3-18
Figure 4.1 Extended Forest Type Stand and Stock Damage Report - Sample Listing (Partial).	4-6
Figure 4.2 Block Stand Damage Table - Sample Listing (Partial).	4-7
Figure 4.3 Block Volume Summary Damage Report - Sample Listing.	4-8
Figure 5.1 Sample Percent Reduction Worksheet.	5-4
Figure 5.2 Percent Reduction Input Values.	5-14
Figure 6.1 Stump Cruise Tally Sheet - Front Side.	6-4
Figure 6.2 Stump Cruise Tally Sheet - Reverse Side.	6-5
Figure 7.1 Scattergram of Card Type 2 trees (Partial).	7-15
Figure 7.2 Height Curve Edits - Sample Listing (Partial).	7-16
Figure 7.3 Regression Coefficients and Calculated Heights – Sample Listing (Partial).	7-17
Figure 7.4 Regression Coefficients and Calculated Heights - Sample Listing - Continued (Partial).	7-18
Figure 8.1 Plot Summary - Sample Listing.	8-8
Figure 8.2 Plot Frequency - Sample Listing.	8-9
Figure 8.3 Plot Distribution by Maturity - Sample Listing.	8-11
Figure 8.4 Cruise Statistics - Sample Listing.	8-24
Figure 9.1 Block Stand Table - Sample Listing (Partial).	9-13
Figure 9.2 Cutting Permit Stock Table - Sample Listing (Partial).	9-23
Figure 9.3 Timber Type Basal Area.	9-32
Figure 10.1 Extended Forest Type Stand and Stock Table - Sample Listing (Partial).	10-9
Figure 12.1 Type Volume Summary - Sample Listing (Partial).	12-37
Figure 12.2 Treatment Unit within Block Volume Summary - Sample Listing (Partial).	12-38
Figure 12.3 Block Volume Summary - Sample Listing (Partial).	12-39
Figure 12.4 Cutting Permit Volume Summary - Sample Listing (Partial).	12-40
Figure 14.1 Coast Appraisal Summary - Sample Listing.	14-7
Figure 14.2 Interior Appraisal Summary – Sample Listing.	14-13
Figure A.7a Lumber Recovery Factors.	A-12
Figure A.7b Lumber Recovery Factors.	A-13

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The error message column describes the behavior of the system when the edit fails.

1. "I" - an informational message, the compilation will complete normally.
2. "W" - a warning, the compilation will complete but is suspect.
3. "F" - a fatal error, the compilation cannot be completed.
4. "N/A" - no error messages are generated for the field.

For a detailed explanation of the Cruise Tally Sheet and Map Area Statement fields refer to Chapters 6 and 7 of the *Cruising Manual*. The *Cruising Manual* is located on the Internet at URL <http://www.for.gov.bc.ca/hva/manuals/cruising.htm>

The input data must be submitted in ASCII format. Here is an example of an input file:

```
V2004.00
ATL7070001002106CE86000100BD 00000125A 00000000000000 TEST 2000
CRUISER B
BTL7070001 00 13217503015010 A N
CTL7070001 01F H C Y 941M200050
CTL7070001 02F B 440M20005000025
DTL70700010010100025 0200025 M
DTL70700010020100025 020002500025 M
FTL7070001 SC0100050 0200050
FTL7070001 SS0200000000025
GTL7070001CLEARCUT SELECTION
9TL70700010010101O011342M 12000B175 SC0602010
2TL70700010010101O01134201410Y 11005 7 3 4300 E
2TL70700010010101O01134202480F 121024 5400 G
2TL70700010010101O01134203522F 13101 5402
2TL70700010010101O01134204499B 07992 432 3122
2TL70700010010101O01134205388H 08001 4300
2TL70700010010101O01134206398F 04551 4144
2TL70700010010101O01134207400C 08601 5300
2TL70700010010101O01134208355C 03558 4144
9TL70700010010107O011442M 12000B175 SC0602010
2TL70700010010107O01144201355Y 04751 3116
2TL70700010010107O01144202422B 10102 4 4301 1BG
2TL70700010010107O01144203388H 09552 4 4202
2TL70700010010107O01144204395S 04991 3122 6AE
2TL70700010010107O01144205322S 04558 2144
2TL70700010010107O01144206455F 09882 4 3124 5CE
2TL70700010010107O01144207355C 12104
2TL70700010010107O01144208352H 06556
2TL70700010010107O01144209429F 14371 4400
2TL70700010010107O01144210590F 15951 4400
2TL70700010010107O01144211450Y 09003 4400
2TL70700010010107O01144212250Y 03703 2201
9TL70700010010103O021442M 12000B175 SC0502010
```

Figure 2.1a Input File (page 1).

2TL70700010010103O02144201455F 08551	4300
2TL70700010010103O02144202488F 03459	4124
2TL70700010010103O02144203389H 09997	2322
2TL70700010010103O02144204499S 12005	6500
2TL70700010010103O02144205572F 14505	6500
9TL70700010010196O021442M 12000F175	SC0502010
2TL70700010010196O02144201455F 08551	4300
2TL70700010010196O02144202488F 03459	4124
2TL70700010010196O02144203389H 09997	3322
2TL70700010010196O02144204499S 12005	6500
2TL70700010010196O02144205389H 09997	4322
2TL70700010010196O02144206499S 12005	6500
9TL70700010020104O011342M 12000F175	SC0802011
2TL70700010020104O01134201398F 085524	5400
2TL70700010020104O01134202422H 07551	4300
2TL70700010020104O01134203366H 06888	4201
2TL70700010020104O01134204102F 10331	6400
2TL70700010020104O01134205245C 03229	1144
9TL70700010020195O011342M 12000F175	SC0802011
2TL70700010020195O01134201398F 085524	5400
2TL70700010020195O01134202422H 07551	4300
2TL70700010020195O01134203366H 06888	4201
2TL70700010020195O01134204102F 10331	6400
2TL70700010020195O01134203366H 06888	4201
2TL70700010020195O01134204102F 10331	6400
9TL70700010020201O021342M 12000F175	SC0502011
2TL70700010020201O02134201455F 08995	4 4124
2TL70700010020201O02134202420H 07551	5303
2TL70700010020201O02134203435B 05522 2	6400
2TL70700010020201O02134204398C 08631	5401
2TL70700010020201O02134205449F 07881	5402
2TL70700010020201O02134206398Y 05562	4 5312
9TL70700010020202O021542M 10000H175	SS0902011
2TL70700010020202O02154201452F 10155	5400
2TL70700010020202O02154202355C 12001	6300
2TL70700010020202O02154203254H 02998	3124
2TL70700010020202O02154204368B 03558	2144

Figure 2.1b Input File (Page 2).

A version number will be placed at the top of the file above card type A. It will start with a V followed by the year, followed by a period followed by 2 digits. For example, the first version in a year would be V2004.00 the next version would be V2004.01. Refer to the 'Valid Compilation Versions' link in the *Cruise Compilation Manual* for the most recent version numbers and cruise compilation companies that are approved to compile cruises for appraisal purposes in British Columbia. The link is located at:

<http://www.for.gov.bc.ca/hva/manuals/validcompversions.htm>

5. Cypress.
6. Fir.
7. Hemlock.
8. Lodgepole Pine.
9. Spruce.
10. White Pine (Albicaulis Pine).
11. Maple.
12. Birch.
13. Total.

The following information will be reported for each species:

1. Each grade percent.
2. The total net merchantable volume for each species and total from the All Method Report (see Chapter 13). Report the whole number.
3. Net Volume per Hectare and Net Volume – All (tree classes 1, 2, 3, 5, 7, 8, 9): Report the net merchantable volume for each species and total from the All Method Summary. Report the number to 3 decimal places.
4. Net Volume per Hectare and Net Volume – Live (tree classes 1, 2, 5, 8): Report the net merchantable volume for each species and total from the All Method Summary. Report the number to 3 decimal places.
5. Net Volume per Hectare and Net Volume – Dead Potential (tree classes 3, 7, 9): Report the net merchantable volume for each species and total from the All Method Summary. Report the number to 3 decimal places.

14.1.2.2 Harvesting Method Parameter Table

Report each of these parameters for each Harvesting Method. The source of the data is the individual Harvesting Method report described in Chapter 13. Use the same number of significant digits for each parameter.

Net volume	Report the total net merchantable volume from the Harvesting Method Summary.
Net Volume per 10 m	Use the actual merchantability required log length, if not equal

Log	to 10 m.
Net Merchantable Volume per Hectare	Report the total net merchantable volume per hectare from the Harvesting Method summary.
Partial Cut Percent	Divide the post-reduction net merchantable volume by the pre-reduction net merchantable volume and multiply by 100. Report this parameter for reduction compilations only. Report to nearest whole number.

Example 14.1

For Harvesting Method 'SS', the pre-reduction net merchantable volume is 2367 m³. The post-reduction net merchantable volume is 1696 m³.

The partial cut percent is $100 * (1696 / 2367) = 72$ percent

Average Slope Percent	Report the average slope percent from the Harvesting Method Report.
Down Tree Percent	Report the percent blowdown volume - net from the Harvesting Method Report.
Heavy Fire Percent	Report the percent heavy fire volume - net from the Harvesting Method Report.

14.1.2.3 Cutting Permit Parameters

Report each of the following parameters from the Cutting Permit volume summary report (see Chapter 12).

95 Percent Confidence Interval	Report the 95 percent confidence interval from the Cutting Permit statistical summary. Always report pre-reduction values.
Trees per Plot	Report the average number of trees per plot (excluding tree class 4 and 6) from the Cutting Permit Statistical Summary.
Percent Immature by Block	Report the percent immature parameter from the Block Volume Summaries.
Plots per Hectare	Report the plots per hectare (including count plots) from the Cutting Permit Statistical Summary.

14.2 Coast Appraisal Summary - Sample Listing



*** FOR APPRAISAL PURPOSES ***

Average Line Method
COAST TEST 2010
Licence Number: 2010T CP: CST
Project:
Location:

Grades: MOP Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 2

Grades: MOP Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 2

Grades: MOP Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 2

Grades: MOP Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 2

Grades: MOP Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 2

Utilization Levels:
Minimum DBH Top Diameter Stump Height
Mature Blocks: (cm) 17.5 15.0 30
Immature Blocks: (cm) 12.0 10.0 30
Standard Log Length: (m) 10.00

Net Area: [All Treatment Units : 10.5]

All Method Summary

Algorithm Grades %

Species	H	I	J	U	X	Y	All	Net Volume (m3)	DP	All	Net Volume / ha	DP
CE Cedar	17	72	11				485	351	134	46.161	33.421	12.740
FI Doug-Fir	11	8	58	21	2		3171	3171	0	302.019	302.019	0.000
HE Hemlock	89	8	3				1323	1323	0	125.969	125.969	0.000
SP Spruce	65	10	25				271	204	67	25.779	19.395	6.385
CO Cottonwood					100		221	221	0	21.037	21.037	0.000
MA Maple					18		106	106	0	10.054	10.054	0.000
Total							5576	5375	201	531.019	511.895	19.125

Harvesting Method Summaries

Harvest Method	Net Volume	Net Vol /10m Log	Net Vol /Hectare	Hem+ Bal+	Partial Cut%	Slope%	Down Tree%	Heavy Fire%
CC	2134	0.63	395.185	42		51	0	0
SC	3442	0.37	674.844	12		37	4	0
Conventional Methods	5576	0.44	531.019	24		44	2	0
All Methods	5576	0.44	531.019	24				

Cutting Authority

95% Confidence Interval	51.8
Plots/Ha	0.9
Cruised Trees/Plot	3.6
Net 2nd Growth-Conifer %	88.9
Net 2nd Growth-Conifer (m3)	4665
Net Immature by Block %	001: 93% 002: 41%
Net Heli Select Conifer (m3/ha)	499.93
Heli Select Total (decimal)	0.00
Heli-Skyline Total (decimal)	0.00
Piece Size - Conifer (m3/10m log)	0.44

Flags: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, CruiseComp Copyright 1996-2010, TECO Natural Resource Group Ltd.

Figure 14.1 Coast Appraisal Summary - Sample Listing.

14.3 Appraisal Summary - Interior

14.3.1 Header Information

Include the following header information for the Interior Appraisal Summary Report.

1. License from card type A.
2. Cutting Permit from card type A.
3. Locality description from card type A.
4. Cruiser or agency from card type A.
5. Forest Inventory Zone and Unit (long name) from card type A.
6. Number of Blocks from card type A.
7. Total merchantable area from card type A.
8. Horse Logging net volume*.
9. Helicopter clear cut net volume*.
10. Helicopter partial cut net volume*.

* The total net merchantable volume from the individual Harvesting Method Reports.

14.3.2 Detail Information

Report the following detail information for the Interior Appraisal Summary Report.

14.3.2.1 Species Parameter Table

Report each of the following parameters from the All Method summary for the following Species:

1. Balsam.
2. Cedar.

3. Fir.
4. Hemlock.
5. Larch.
6. Lodgepole Pine.
7. Spruce.
8. Yellow Pine (Ponderosa Pine).
9. White Pine.
10. Whitebark Pine.
11. Conifer - combine all coniferous Species in the compilation.

12. Total.

Net Volume	Report the net merchantable volume for each species, conifer and total from the All Method Summary.
Net Volume per Hectare and Net Volume - All (tree classes 1, 2, 3, 5, 7, 8, 9):	Report the net merchantable volume for each species, conifer and total from the All Method Summary. Report the number to 3 decimal places.
Net Volume per Hectare and Net Volume - Live (tree classes 1, 2, 5, 8):	Report the net merchantable volume for each species, conifer and total from the All Method Summary. Report the number to 3 decimal places.
Net Volume per Hectare and Net Volume - Dead Potential (tree classes 3, 7, 9):	Report the net merchantable volume for each species, conifer and total from the All Method Summary. Report the number to 3 decimal places.
Percent Decay	Report the percent decay - net from the All Method Summary.
Stud Log Percent	Report the percent stud log volume - net from the All Method Summary.
LRF	Report the Average LRF from the All Method Summary.
Burn Percent	Report the percent fire damage volume - net from the All Method Summary.

14.3.2.2 Harvesting Method Parameter Table

Report each of the following parameters from the Harvesting Method summaries as described in chapter 13. Use the same number of significant digits for each parameter.

Net volume	Report the total net merchantable volume from the Harvesting Method Summary.
Average Slope Percent	Report the average slope percent from the Harvesting Method Summary.
Net Volume per Tree	Report the net merchantable volume per tree from the Harvesting Method Summary.
Net Volume per hectare	Report the net merchantable volume per hectare from the Harvesting Method Summary.
Stand Defect Percent	Report the percent total cull from the Harvesting Method Summary.
Partial Cut Percent	<p>Divide the post-reduction net merchantable volume by the pre-reduction net merchantable volume and multiply by 100.</p> <p>Report this parameter for reduction compilations only.</p> <p>Report to nearest whole number.</p>
All Fire Percent	Report the percent fire volume - net from the Harvesting Method Report.
Heavy Fire Percent	Report the percent heavy fire volume - net from the Harvesting Method Report.
Down Tree Percent	Report the percent blowdown volume - net from the Harvesting Method Report.
Dead Useless Percent	Report the percent dead useless trees from the Harvesting Method Report.
Lodgepole Pine volume for Highlead/Grapple Harvest Methods	Report the Lodgepole Pine volume for Highlead/Grapple Harvest Methods from the Harvesting Method Report.

14.3.2.3 All Method Parameter Table

Report each of the following parameters from the All Method summaries as described in chapter 13.

Net volume per tree	Report net volume per tree from the All Method Summary.
Net volume per hectare	Report the Net volume per hectare from the All Method Summary.
Slope	Report the slope from the All Method Summary.

14.3.2.4 Appraisal Summary Page – Insect Damage Table

Report the following attributes in a tabular format below the Lodgepole Pine Harvesting Method attributes on the Interior Appraisal Summary Page:

Cutting Permit PL green attack net merchantable volume (m ³)	This is the Pl insect code 1 (green attack) net merchantable volume reported in the “Cutting Permit Damage Summary (Insect) - All Treatment Unit” report.
Cutting Permit PL red attack net merchantable volume (m ³)	This is the Pl insect code 2 (red attack) net merchantable volume reported in the “Cutting Permit Damage Summary (Insect) - All Treatment Unit” report.
Cutting Permit PL grey attack net merchantable volume (m ³)	This is the Pl insect code 3 (grey attack) net merchantable volume reported in the “Cutting Permit Damage Summary (Insect) - All Treatment Unit” report.
All other species insect and defoliator attack net merchantable volumes	This is the sum of the non-Pl insect codes 1, 2, 3, 5, 6, 7, 8, X, Y beetle and defoliator net merchantable volume reported in the “Cutting Permit Damage Summary (Insect) - All Treatment Unit” reports. Do not include the “Normal” category in the sum of the net merchantable volume.

Refer to Figure 14.4 for the format of the new Interior Appraisal Summary page.

14.3.2.5 Appraisal Summary Page – Lodgepole Pine Insect Damage by Block

Report the following attributes in a tabular format beside the Insect Damage Table on the Interior Appraisal Summary Page:

Report the lodgepole pine (PI) net volume percent in each block that is red and grey attack. Divide the PI red and grey attack net volume in each block by the total coniferous volume in each block and multiply by 100. The volume is expressed as percent (%) to the nearest whole number.

14.4 Interior Appraisal Summary – Sample Listing



*** FOR APPRAISAL PURPOSES ***

Average Line Method
INTERIOR TEST 2010
Licence Number: TEST10 CP: INT
Project:
Location :

Grades: MOF Computerized
Computerized Decay
Computerized Waste
Computerized Breakage
No Of Blocks : 3

Appraisal Summary Report
FZI: E
FSYU: Creston
Region: 2 - Southern Interior
District: 9 - Arrow Boundary

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Compiled by: TECO NRG Ltd.
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Utilization Levels:
Mature Blocks: (cm) 17.5 30
Immature Blocks: (cm) 12.0 30
Exception(Pl): (cm) 12.5 30
Standard Log Length:(m) 5.00

Net Area: (All Treatment Units : 22.0)

All Method Summary

Species	All	Net Volume (m3)	DP	All	Net Volume / ha	DP	Decay%	Stud Log%	LEP	All Burn%
Code Description										
BA Balsam	458	458	0	20.829	20.829	0.000	3	40	196	20
FI Doug-Fir	353	261	92	16.032	11.859	4.163	3	53	188	0
HE Hemlock	258	258	0	11.710	11.710	0.000	2	0	197	0
LO Lodgepole Pine	4843	2436	2406	220.120	110.746	109.374	10	31	143	0
SP Spruce	1805	1690	115	82.026	76.820	5.206	4	45	190	4
WB Whitebark Pine	125	125	0	5.685	5.685	0.000	1	0	192	100
WH Western White Pine	220	220	0	10.005	10.005	0.000	1	0	179	0
IE Inland Fir	118	118	0	5.555	5.555	0.000	2	0	206	0
Conifer	8183	5571	2612	371.963	253.220	118.743	8	33	206	4
Total	8183	5571	2612	371.963	253.220	118.743	8	33	206	4

Harvesting Method Summaries

Species	Net Volume	Average Slope%	Net Vol /Tree	Net Vol/ha	Defect% (DMB)	Partial Cut%	All Fir%	Heavy Fir%	Down Trees	Dead Useless%
All Species SC	8183	10	0.58	371.963	21		4	1	6	3
Conifer	8183	10	0.58	371.963	21		4	1	6	3
All Methods	8183	10	0.58	371.963	21		4	1	6	3

Insect Damage Net Volume (m3)

Green Attack	L.P. Pine	All Other Conifer
Red Attack	Red Attack	Insect Damage
146	2290	1335

Cutting Authority

95% Confidence Interval
Plots/Ha 28.5
Cruised Trees/Plot 6.5

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Met Belt Fir
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L.P. Pine Red/Grey Attack % of Conifer by Block

078: 28% 088: 71% 098: 64%

Figure 14.2 Interior Appraisal Summary – Sample Listing..

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graph TD
    Start([A.9.9]) --> Immature{Immature}
    Immature -- No --> TopDib1{Top dib any log > 37cm}
    Immature -- Yes --> TopDib1
    TopDib1 -- No --> RottenBranch{Rotten branch position 2, 5}
    TopDib1 -- Yes --> RottenBranch
    RottenBranch -- Yes --> LiveLimb1{Live limb position 1, 3, 5}
    RottenBranch -- No --> LiveLimb1
    LiveLimb1 -- Yes --> PreviousLog{Previous log - live limb position 2, 4, 6}
    LiveLimb1 -- No --> PreviousLog
    PreviousLog -- Yes --> I[I]
    PreviousLog -- No --> TopDib2{Top dib any log <= 49 cm}
    TopDib2 -- Yes --> LiveBranch1{Live branch/dead stub in 1st 10.3 m}
    TopDib2 -- No --> LiveBranch1
    LiveBranch1 -- Yes --> LiveBranch2{Live branch/dead stub in first 10.3 m of tree}
    LiveBranch1 -- No --> LiveBranch2
    LiveBranch2 -- Yes --> SpiralGrain1{Spiral grain > 4% of log top diameter or spiral grain > 6cm}
    LiveBranch2 -- No --> SpiralGrain1
    SpiralGrain1 -- Yes --> H[H]
    SpiralGrain1 -- No --> FrostCrack{Frost crack position 1, 6 and dbh > 135}
    FrostCrack -- Yes --> I
    FrostCrack -- No --> SpiralGrain2{Spiral grain > 7% of log top diameter or spiral grain > 8 cm}
    SpiralGrain2 -- Yes --> I
    SpiralGrain2 -- No --> ClearPanels1{2nd 10 m log from ground and < 4 clear panels in 2nd 5 m}
    ClearPanels1 -- Yes --> I
    ClearPanels1 -- No --> ClearPanels2{3rd 10 m log from ground and live branch in 5th 5 m log or lower}
    ClearPanels2 -- Yes --> I
    ClearPanels2 -- No --> TopDib3{Top dib any log < 59 cm}
    TopDib3 -- Yes --> F[F]
    TopDib3 -- No --> ClearPanels3{2nd 10 m log from ground and tree height < 45 m}
    ClearPanels3 -- Yes --> H
    ClearPanels3 -- No --> ClearPanels4{< 4 clear panels in 1st 5M}
    ClearPanels4 -- Yes --> H
    ClearPanels4 -- No --> ClearPanels5{< 2 clear panels in 2nd 5 m}
    ClearPanels5 -- Yes --> H
    ClearPanels5 -- No --> ImmatureTree{Immature tree}
    ImmatureTree -- Yes --> H
    ImmatureTree -- No --> D[D]
    D -- No --> ClearPanels6{< 3 clear panels in 2nd 5 m}
    ClearPanels6 -- Yes --> F
    ClearPanels6 -- No --> ClearPanels7{2nd 10 m log from ground}
    ClearPanels7 -- Yes --> F
    ClearPanels7 -- No --> I
  
```

The flowchart determines the quality class of a tree based on the following criteria and decision points:

- Start:** A.9.9
- Immature:** If Yes, proceed to Top dib any log > 37cm. If No, proceed to Top dib any log <= 49 cm.
- Top dib any log > 37cm:** If Yes, proceed to Rotten branch position 2, 5. If No, proceed to Live limb position 1, 3, 5.
- Rotten branch position 2, 5:** If Yes, proceed to Live limb position 1, 3, 5. If No, proceed to Live limb position 1, 3, 5.
- Live limb position 1, 3, 5:** If Yes, proceed to Previous log - live limb position 2, 4, 6. If No, proceed to Top dib any log <= 49 cm.
- Previous log - live limb position 2, 4, 6:** If Yes, proceed to Class I. If No, proceed to Top dib any log <= 49 cm.
- Top dib any log <= 49 cm:** If Yes, proceed to Live branch/dead stub in 1st 10.3 m. If No, proceed to Live branch/dead stub in first 10.3 m of tree.
- Live branch/dead stub in 1st 10.3 m:** If Yes, proceed to Live branch/dead stub in first 10.3 m of tree. If No, proceed to Live branch/dead stub in first 10.3 m of tree.
- Live branch/dead stub in first 10.3 m of tree:** If Yes, proceed to Spiral grain > 4% of log top diameter or spiral grain > 6cm. If No, proceed to Spiral grain > 4% of log top diameter or spiral grain > 6cm.
- Spiral grain > 4% of log top diameter or spiral grain > 6cm:** If Yes, proceed to Class H. If No, proceed to Frost crack position 1, 6 and dbh > 135.
- Frost crack position 1, 6 and dbh > 135:** If Yes, proceed to Class I. If No, proceed to Spiral grain > 7% of log top diameter or spiral grain > 8 cm.
- Spiral grain > 7% of log top diameter or spiral grain > 8 cm:** If Yes, proceed to Class I. If No, proceed to 2nd 10 m log from ground and < 4 clear panels in 2nd 5 m.
- 2nd 10 m log from ground and < 4 clear panels in 2nd 5 m:** If Yes, proceed to Class I. If No, proceed to 3rd 10 m log from ground and live branch in 5th 5 m log or lower.
- 3rd 10 m log from ground and live branch in 5th 5 m log or lower:** If Yes, proceed to Class I. If No, proceed to Top dib any log < 59 cm.
- Top dib any log < 59 cm:** If Yes, proceed to Class F. If No, proceed to 2nd 10 m log from ground and tree height < 45 m.
- 2nd 10 m log from ground and tree height < 45 m:** If Yes, proceed to Class H. If No, proceed to < 4 clear panels in 1st 5M.
- < 4 clear panels in 1st 5M:** If Yes, proceed to Class H. If No, proceed to < 2 clear panels in 2nd 5 m.
- < 2 clear panels in 2nd 5 m:** If Yes, proceed to Class H. If No, proceed to Immature tree.
- Immature tree:** If Yes, proceed to Class H. If No, proceed to Class D.
- Class D:** If No, proceed to < 3 clear panels in 2nd 5 m.
- < 3 clear panels in 2nd 5 m:** If Yes, proceed to Class F. If No, proceed to 2nd 10 m log from ground.
- 2nd 10 m log from ground:** If Yes, proceed to Class F. If No, proceed to Class I.

A9.11 Percentages within Spruce Grades

District	D	E	F	G
Campbell River	7	4	37	52
Chilliwack	0	0	0	100
South Island	20	11	35	34
North Coast	10	24	18	48
North Island – Central Coast	22	15	25	38
Haida Gwaii (formerly Queen Charlotte Island)	14	23	13	50
Squamish	0	0	0	100
Sunshine Coast	2	26	11	61

Source of the table is the Coast Grade Distribution Report 2008-04-01 to 2010-03-31.

5. Mature spruce logs (greater than 120 years based on the age in 10s and tree class) will be separated into D, E, F and G grades where appropriate.

Example: In the Campbell River District when a log reaches the D/E/F/G decision box 7% of the log will be deemed to be D grade, 4% will be deemed to be E grade, 37% will be deemed to be F grade and 52% will be deemed to be G grade.

A9.11.1 Percentages within Cedar Grades

District	D	F	I
	K	L	M
Campbell River	34 66	11 89	65 35
Chilliwack	15 85	7 93	73 27
South Island	46 54	12 88	67 3
North Coast	16 84	12 88	74 26
North Island – Central Coast	25 75	10 90	64 36
Haida Gwaii (formerly Queen Charlotte Island)	26 74	13 87	73 27
Squamish	10 90	4 96	72 28
Sunshine Coast	18 82	6 94	71 29

- Source of the table is the Coast Grade Distribution Report 2008-04-01 to 2010-03-31.
- Immature red cedar logs (up to 120 years old based on the age in 10s and tree classes) flow only into the I-grade where appropriate. Mature red cedar (greater than 120 years based on the age in 10s and tree class) will be separated into I and M grades where appropriate.

Example: In the Campbell River District when a log reaches the D/K decision box 34% of the log will be deemed to be D grade and 66% will be deemed to be K grade.

A9.12 Deciduous

