

Ref: 2226

January 12, 2017

BY EMAIL

To: Regional Executive Directors, Ministry of Forests, Lands & Natural Resource Operations

Re: 2014 Cruise Compilation Manual Amendment No. 3

The purpose of the memo is to inform you that Amendment No. 3 to the 2014 *Cruise Compilation Manual* becomes effective on January 13, 2017.

The new manual will be available on the internet at the following link:

<http://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/timber-cruising/cruise-compilation-manual>

Please find a copy of the Manual Highlights attached.

Please note that should a recompilation be required after January 13, 2017 for changed circumstance purposes, the most recent version of the compilation as authorized on the following website is acceptable:

http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/timber-pricing/timber-cruising/cruise_comp_valid_compilation_ver_amend_3.pdf

Comments or questions about this manual should be referred to Mark Koepke, Cruising Analyst, Timber Pricing Branch at (250) 483-5923 or Beth Eagles, Cruising Policy Forester, Timber Pricing Branch (250) 387-8307.



Steven Kozuki
Director
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Attachments

pc: Vera Sit, Executive Director, Timber Operations, Pricing and First Nations Division
Dave Spinks, Regional Cruising Specialist, Thompson Okanagan Region
Carissa Logue, Cruising and Waste Specialist, West Coast Region
Greg Jonuk, Cruising Specialist, North Area, Omenica Region

Highlights

2016 *Cruise Compilation Manual* Changes

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

<http://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/timber-cruising/cruise-compilation-manual>

Section	Description
3.2.1 – Step 4	Change to breakage factor add-on for dead potential pine (Tree Class 3, 7, 9) from 20.0 to 28.0.
4.2	In volume example - change to breakage factor add-on for dead potential lodgepole pine from 20.0 to 28.0.
Valid Compilation Versions Site	<p>The valid compilation versions web site will be updated to indicate that the compilation programs have been updated.</p> <p>http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/timber-pricing/timber-cruising/cruise_comp_valid_compilation_ver_amend_3.pdf</p>

Step 3 Determine loss factor table.

1. Use FIZ tables unless a local loss factor exists for the Unit. All local factors apply only to mature volumes (i.e., 121 years or greater). Refer to Table 17 of the [Cruising Manual](#).
2. Determine maturity based on tree class and age. Refer to the Tree Class Modification of Loss Factors in Table 17 of the *Cruising Manual* at the above URL.
3. Determine Risk Group based on tree class and Section 3.5.6, pathological remarks, and damage.

Tree Class - Tree classes 3, 4, 6, 7 & 9 automatically go to highest Risk Group. The exception being Tree Class 7 Lodgepole Pine in the Interior. These stems will be classed as Risk Group 2. Conk, Blind conk, fire code C and blowdown code G will move these stems into Risk Group 3.

Pathological Indicators - Tree class 1, 2, 5 & 8 trees start at the lowest risk group and are then placed into a higher risk group, depending on pathological indicators. Refer to Table 18 in the [Cruising Manual](#).

Damage Codes - trees are further moved into higher risk groups depending on the damage codes associated with them.

Insect Damage

If the Risk Group is not 2 or 3, then increase the Risk Group by 1 for insect damage codes 1, 2, 3, 4, 6, 7 and 8.

Fire Damage

There is no change in Risk Group for fire damage code A.

If the Risk Group is not 2 or 3, and the tree class is 1, 2, 5 or 8, then increase the Risk Group by 1 for fire damage code B. For other tree classes, use the highest Risk Group.

Use the highest Risk Group for fire damage code C.

Blowdown Damage

There is no change in Risk Group for blowdown code E.

For blowdown damage code G, use the highest Risk Group.

For cedar loss factor table 296, the Risk Group is based on the average height from card type 9. If the average height ≤ 40 , then the risk group is 2.

Otherwise, the Risk Group is 1.

4. Determine diameter class, based on DBH. Refer to Appendix 14.

Step 4 Apply loss factors - refer to the "*Cruise Compilation Loss Factor Table Manual*", 1976, for the specific table. Reduce the tree volume by the specified percentages. Apply the loss factors individually and in the order {Decay → Waste → Breakage}.

For mature coast cottonwood, a flat rate of 15 percent is applied in lieu of the loss factors.

For interior Lodgepole Pine addition breakage factors are reduced from gross volume based on insect damage codes and/or tree classes.

The additional breakage factor for all risk group 3 stems is zero (0).

Tree Classes	Damage Code	Breakage Factor Add On
1, 2, 5, 8	No insect code	0
1, 2, 5, 8	1	0
1, 2, 5, 8	2	7.5
3, 7, 9	3	28.0
3, 7, 9	No insect code	28.0

4.2 Damage Report Calculation

Trees with multiple damage codes will report each damage type in the *Damage Summary Reports*. The damage code or codes that will assign the highest risk group will be used in the calculation of the net volume for each of the damage types. If pathological indicator(s) move the risk group higher than the damage code(s) then use the risk group from the pathological indicator(s) to calculate the *Damage Summary Reports*.

Example

Cruise = 1 ha, 1 plot, 1.0 m³ mature Lodgepole Pine tree that represents 100 stems/ha with down tree code G, fire code B and insect 3:

Risk groups (RG) -Down Tree = RG3, Fire = RG2, Insect 3 = RG 2. Use RG 3 since it is the highest risk group.

Volume - Hypothetical loss factor DWB = 30% plus 28% for the grey attack breakage add-on = 58%.

Tree = 1.0 m³ - 0.5 m³. Cruise volume per hectare = 0.5 * 100 stems = 50 m³.

Damage reports -Type, Block and Cutting Permit Damage Report Net Volume = 50 m³ for Lodgepole pine Down Tree (G), Fire (B) and Insect (3).

4.3 Sample Damage Report Listings

Some of the DBH classes have been removed from these sample listing.

4.3.1 Extended Forest Type Stand and Stock Damage Report - Sample Listing

FOREST REVENUE BRANCH - 2001.0									
NOT FOR APPRAISAL PURPOSES DUE TO NON-STANDARD UTILIZATION **** DOUBLE SAMPLING CRUISE ****									
NOTE - ALL TREES GREATER THAN 275 CM ARE INCLUDED IN THE 275 CM CLASS									
LICENCE NUMBER CF7080									
CUTTING PERMIT 000									
ROAD/LANDINGS AREA - 5.0 OTHER AREA - 0.0 NO. OF PLOTS (M/C) 3. 3. NO. OF DEAD TREES 0.									
TYPE 1 - PA H C 9 4 1 SPECIES CEDAR									
DOWN & SHATTERED - UPROOTED DAMAGE									
LIVING TREES									
AVERAGE									
DBH	HT	GROSS	NET	RISK	RISK	RISK	RISK	RISK	RISK
CL	CM	PER TREE	PER TREE	GROUP 0	GROUP 1	GROUP 2	GROUP 3	POTENTIAL	TOTAL
		(M3)	(M3)						
40									
45									
50									
55	37.5	2.807	1.348			10.33			10.33
60									
65									
70									
75									
80									
85									
90									
TOTAL OF AVERAGES +									
PERCENT BY TREE CLASS									
TREES 12.5 +									
TREES 17.5 +									
TREES 22.5 +									
TREES 27.5 +									
TREES 32.5 +									
AVERAGE DBH (CM) AT 5 LEVELS									
100.00									
55.50									
55.50									
55.50									
55.50									
55.50									
55.50									

Figure 4.1 Extended Forest Type Stand and Stock Damage Report - Sample Listing (Partial).

Cruise Compilation Manual – Valid Compilation Versions

Compilation Agency	Version Number	Date	Type of Cruise
Coast			
Claymore Consulting Group Ltd.	2016.01	January 13, 2017	CS
Industrial Forestry Service Ltd. Cruise Comp	2016.01	January 13, 2017	CS
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Interior			
Claymore Consulting Group Ltd.	2016.01	January 13, 2017	IS
Industrial Forestry Service Ltd. Cruise Comp	2016.01	January 13, 2017	IS
Advent Technologies Inc. CompMate*	2016.01	January 13, 2017	I

* CompMate is not approved for use in Coastal cruises, stump cruises or cruises containing fixed plots.

C = Coast
I = Interior
S = Stump

Cruises compiled with versions 2016.00 (or Compmate version 2015.00) before January 13, 2017 will be allowed for cutting authorities with an effective date prior to April 13, 2017.