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March 29, 2006

BY EMAIL

To: Regional Executive Directors

Re: Amendment No. 3 to the *Cruise Compilation Manual*

I hereby approve Amendment No. 3 to the *Cruise Compilation Manual*, and attach a copy for your use.

This amendment will come into force on April 1, 2006. Further amendments or revisions to this manual require my approval.



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Attachments

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Amendments

Amendment No. 3 - Effective April 1, 2006

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
Chapter 3	Section 3.2.1, Step 4 has been updated to include new breakage factor add-ons to interior Lodgepole Pine. There is no add-on to risk group 3 stems.

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* at the following URL:
<http://www.for.gov.bc.ca/hva/manuals/cruising/Table-10.htm>
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, 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 at the following URL:
<http://www.for.gov.bc.ca/hva/manuals/cruising/Table-11.htm>

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 "Metric Diameter Class Decay, Waste and Breakage Factors", 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	20.0
3, 7, 9	No insect code	20.0

Example 3.3 - Application of Loss Factors

A tree class 1 Douglas Fir in FIZ C with an age in 10's of 13 would use the mature loss factors. For Risk Group 1 and DBH 45.5 cm, the loss factors are:

$$\text{Decay} - 4.1\% + \text{Waste} - 2.8\% + \text{Breakage} - 5.0\% = 11.9\%$$

If the gross merchantable volume of the tree was 2.023810 m³, then the net merchantable volume is:

$$2.023810 - (0.119)(2.023810) = 1.782976 \text{ m}^3$$