

Introduction

1

The *Call Grade Net Factor (CGNF) Manual* has been developed to document the CGNF compiler process for MOF appraisal purposes. Where not specifically noted in this manual, all standards and procedures currently in the Cruise Compilation Manual will be followed.

The intent of this section is to provide an overview of CGNF as it applies to appraisal cruises.

CGNF uses cruiser estimates of decay, waste and value (grades) for individual logs in a tree. There are no risk groups used in CGNF. The cruiser estimates the quality of each log using the Coast Scaling alpha grades. These grades are called using preferred lengths of 13, 11 and 8 metres. Random lengths are permitted for deformities in the stem and for the last log.

Pathological remarks, tree classes and age in tens are replaced with tree maturity codes for mature and second growth and tree code live and dead.

The log volume formula used in this manual is Smalian's formula using 10cm segments.

The net volume principles, procedures and standards will be fine tuned through an unbiased net volume adjustment process that will be applied as post-cruise compilation factors known as species net volume adjustment factors (NVAF). As part of the NVAF process, the gross taper has been adjusted by applying a volume adjustment. These two processes have been separated but in the end the goal is to provide the best estimate of net volume based on the data available. See Chapter 3.1, step 3 for equations and Appendix 1, step 3 for an example.

The compiler process for volume deduction is as follows:

1. The original gross volume is adjusted by the gross taper volume ratio.
2. Each log's net factor is adjusted by the NVAF process to calculate the final net volume by log.

The last log of a tree is calculated based on the minimum length of the grade of the log. If the last log is shorter than the minimum length specified for the logs grade, the last log

is combined with the second to last log and takes on the grade of the second to last log. See Appendix 1 step 2.4 for an example.

1.1 All Reports

The differences between the Call grading net factoring and the loss factor systems will necessitate changes to some reports.

All reports will require the following similar changes.

- All summaries will report Call Grading Net Factoring in the header.
- All live trees will be coded “L” and replace tree classes 1 ,2, 5, 8.
- All dead trees will be coded “D” and replace tree classes 3, 7, 9.
- Snags/ha and Average Snag DBH are not reported.
- Immature % is the sum of net volumes of all trees (coniferous and deciduous) with tree code ‘S’ (second growth) divided by the total net volume of all trees (coniferous and deciduous). Use the loss factor cruise Card Type D block maturity indicator for the loss factor and the CGNF cruises in the transition period from loss factor to CGNF cruising.
- Second growth % is the sum of all coniferous net volumes with tree code ‘S’(second growth) divided by the total net volume of all coniferous trees.
- Short trees that have only one log less than 3.0 metres will not be included in the compilation. A line at the bottom of reports should indicate the number of trees removed from the compilation. There is no requirement to report these trees as useless (tree class 4 or 6) since CGNF cruises do not report useless trees. Since short trees that have only one log less than 3.0 m were cruised, these trees will be included in the cruised trees/plot field.
- Decay % is corrected decay volume/corrected gross volume.
- Z grade logs will be compiled as waste volume. When a tree is coded as Z-99-00 then no values will be reported for that stem.
- Waste percent is the corrected waste volume/corrected gross volume.
- Breakage percent will report the newly update breakage % for CGNF based on the loss factor breakage percentages. Breakage % is unadjusted breakage volume/corrected gross volume. See Appendix 3.
- PSYU and Unit # are not required.

1.2 Required Reports

1.2.1 Plot Summary

- Loss factor reference numbers are not required.

1.2.2 Cruise Statistics

- Useless trees are not reported.

1.2.3 Stand, Stock, and Basal Area Reports

- Useless trees are not reported.
- Live trees (tree code “L”) are reported by species in the tables and in Total column.
- Dead trees (tree code “D”) are reported in the DP column.

1.2.4 Volume Summaries

- Snags/ha and Avg. Snag DBH fields are not reported.
- Decay percent (%) field is calculated using cruiser net factoring estimates.
- Waste percent (%) field is calculated using the cruiser estimated Z grade waste less decay less breakage volume.
- Waste (billing) percent is not required.
- Breakage percent (%) field is calculated using the CGNF breakage table
- Average 10 metre log gross or net fields are not required.
- Average number (#) of 10 metre logs/tree field is not required.
- Alpha grades will summarize by nearest 1%. Grades include: B, C, D, E, F, G, H, I, J, K, L, M, U, X, and Y. Z grades will be reported using the waste percent (%) field. When a tree is coded as Z-99-00 then no values will be reported for that stem. N grade (nothing there) is collected by the cruiser but is not reported for net volume.

1.2.5 Harvesting Method Summary

- Decay % field is calculated using cruiser net factoring estimates.
- Waste percent (%) field is calculated using the cruiser estimated Z grade waste less decay less breakage volume.

- Waste (billing) % is not required.
- Average 10 metre log gross or net fields are not required.
- Useless Dead/ Living field is not required.
- Net second growth percent (%) field is calculated using the maturity tree code “S” to calculate the percentage of second growth trees. Only coniferous trees are used to summarize the net second growth %.
- Alpha grades will summarize by nearest 1%. Grades include: B, C, D, E, F, G, H, I, J, K, L, M, U, X, and Y. Z grades will be reported using the waste % field. When a tree is coded as Z-99-00 then no values will be reported for that stem. N grade (nothing there) is collected by the cruiser but is not reported for net volume.

1.2.6 Appraisal Summaries

- Alpha grades will summarize by nearest 1%. Grades include: B, C, D, E, F, G, H, I, J, K, L, M, U, X, and Y. Z grades will be reported using the waste percent (%) field. N grade (nothing there) is collected by the cruiser but is not reported for net volume.
- Net volume/10 metre log is not required.
- Cruised trees/plot will summarize all trees cruised. The cruised trees will include short trees that are not compiled.
- Net second growth percent (%) field uses tree code “S” to calculate the percentage of second growth trees. Only coniferous are used to summarize the net second growth %

1.2.7 Percent Reduction Report

- Block field is not required. Block reductions are unavailable for use at this time.
- Tree class is not required. Tree class is not available in CGNF cruises.
- Species, Type, Treatment unit and damage are available for reduction purposes.
- Maturity field may be reported. The maturity field is available for CGNF cruises.
- Live/Dead field may be reported. The Live/Dead field is available for CGNF cruises.

1.2.8 Extended Forest Type Stand and Stock Reports

- This report is not required in CGNF cruise compilations.

This page is intentionally left blank.