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November 15, 2021

BY EMAIL

To: Regional Executive Directors

From: Allan Bennett,
Director
Timber Pricing Branch

Re: Amendment No. 5 to the *Provincial Logging Residue and Waste Measurement Procedures Manual – Interior Version*

I hereby approve Amendment No. 5 to the *Provincial Logging Residue and Waste Measurement Procedures Manual – Interior Version*.

The manual can be found here:

[Provincial Logging Residue and Waste Measurement Procedures Manual – Interior Version](#)

The purpose of this amendment is to update the *Provincial Logging and Waste Measurement Procedures Manual – Interior Version* in order to:

- Authorize the District Manager to waive the 30-day waiting period before treating waste piles;
- provide a grading rule for charred bucking waste;
- simplify grading rule for catface in bucking waste.

Amendment No. 5 comes into effect on November 15, 2021.

Allan W. Bennett, RPF
Director
Timber Pricing Branch

Attachments:

pc: Jim Schafthuizen, Executive Director, Forest Policy and Indigenous Relations Division
Patrick Asante, Manager, Timber Pricing, Timber Pricing Branch
Jason Smith, A/Provincial Waste Specialist, Timber Pricing Branch
Michael Wedel, Cruising Policy Forester, Timber Pricing Branch

Amendment No. 5 – Provincial Logging Residue and Waste Procedures Manual – Interior Version Highlights

| Section, Table or Appendix Number | Description |
|--|--|
| 4.2.1.1 | Authorized the District Manager to waive the 30-day waiting period before treating waste piles |
| 9.5.5.5 | Added a section to describe charred wood and scorched wood |
| Appendix 1 | Glossary. Added definitions for charred wood and scorched wood |
| Appendix 10 | Updated the bucking waste grading matrix and field card rules for charred wood and catface |

TIMBER PRICING BRANCH

Provincial Logging Residue and Waste Measurement Procedures Manual – Interior Version

Effective: April 1, 2019

| Includes Amendments | Effective Date |
|----------------------------|--------------------------|
| Amendment No. 1 | July 22, 2019 |
| Amendment No. 2 | September 1, 2020 |
| Amendment No. 3 | April 1, 2021 |
| Amendment No. 4 | June 17, 2021 |
| Amendment No. 5 | November 15, 2021 |



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Waste surveys must be submitted to the District Manager using the earliest timeframe as laid out in section 4.2.1.1 or 4.2.1.2, depending on which occurs first.

In all cases, submissions must be completed prior to site treatments and hazard abatement requirements occurring.

When the access to a waste assessment area is restricted by snow, licensees may apply to the District Manager to extend the completion timeline by 30 days.

Survey reports submitted to the District Manager after November 15th may result in having invoices issued in the following year.

4.2.1.1 Submission Requirements for Waste Assessment Areas Requiring Site Treatments or Hazard Abatement

Waste assessment areas must be surveyed and submitted to the District Manager the earliest of:

1. A minimum of thirty (30) days prior to:
 - a. The commencement of any post-harvest site treatments that will alter the waste volumes or grades (i.e. stumping, burning, mounding), or
 - b. The reduction of the fuel hazard as required by the Wildfire Regulation section 12.1, or
2. No later than September 15.
 - a. Where a waste assessment area has a ready for survey date between August 15 and September 15, and site treatments or hazard abatement are to occur later in the fall, Licensees may apply to the District Manager to extend the completion timeline by 30 days.

Where a waste assessment area in an aggregate sample plan is planned for site treatments or hazard abatement, and the population is not ready to be submitted into the Waste System, the survey data in the form of the EFW file must be submitted to the District 30 days prior to any activities occurring.

In a large population, post-harvest treatments may commence at any time on completed waste assessment areas that have been included in a batch in HRC and are not selected to be surveyed.

Partial cutblock waste assessment areas may be submitted in order to complete waste assessment obligations prior to hazard abatement.

The District Manager may waive the 30 day submission requirement if the block:

- 1) is submitted to the waste system,
- 2) was reviewed, and
- 3) is not held for field audit.

9.5.5.3 Grading Bucking Waste

All bucking waste pieces must be assigned a grade code. Grading assigns the waste billing rate and the cut control attribution category for the piece.

The short lengths as well as field conditions that affect the measurement and classification of the pieces limit the amount of information available to correctly assign a grade code. Harvest methods, utilization standards, log quality, decay and many other factors influence how and why pieces of bucking waste are cut from logs.

In the Interior, bucking waste is graded using the grading matrix and field card contained in Appendix 10.

Waste grades are determined by the balance of probability based on the grade the piece would have been. Not all results will generate the correct grade on all pieces.

9.5.5.4 Sequential Pieces of Bucking Waste

Where a plot contains multiple pieces of bucking waste that are cut sequentially from the same log, the pieces may be tallied as a single piece. Sequential pieces exhibit consistent taper, matching cuts, and matching features amongst the pieces (i.e. species, shape, rot, and knot pattern).

To tally bucking waste as a single piece, determine the grade of each piece using the bucking card. Group sequential pieces with the same waste class and grade together and assign a piece number.

When a change of grade or class occurs, a new piece must be recorded.

Sequential pieces with a combined total length greater than or equal to 3 metres must be entered as kind “L” (log).

9.5.5.5 Charred Wood

The presence of charred wood greatly affects lumber recovery and a small amount of char can contaminate pulp and paper products. Lumber recovery may also be affected by checking that is not visible due to the presence of charred wood.

Bucking waste with charred wood is graded using the grading matrix and field card contained in Appendix 10.

Scorching is superficial fire damage that affects the surface of the wood or the bark. It does not affect the visibility of checks. Scorching does not greatly affect lumber recovery because it can be removed during the debarking process.

Figure 13 Example of Charred Wood



Figure 14 Example of Scorched Wood



9.5.6 Forks

A fork is defined as a division of a log or bucking waste into two or more stems. If forks are found in logs (pieces greater than or equal to 3.0 m in length) no pencil bucking is permitted. If forks are found in bucking waste (pieces less than 3.0 m in length), forks can be pencil bucked and treated as separate pieces as per Figure 12.

The point at which the pith separates is the starting point of a fork.

If the diameter of a fork is greater than or equal to the minimum diameter of the timber merchantability specifications, the portion(s) of the tree above the fork or crook must meet the criteria for minimum log length to be considered avoidable.

Appendix 1 Glossary

Words and expressions used but not defined in this Manual, unless the context otherwise requires, have the same meaning as in the Forest Act.

“**AAC**” means Allowable Annual Cut as defined in the *Forest Act*;

“**Act**” means *Forest Act*;

“**Aggregate Waste Submission**” means a waste submission relating to two (2) or more waste assessment areas but not exceeding 19 waste assessment areas;

“**Agreement**” means a form of agreement referred to in section 12 of the *Act*, or a pulpwood agreement;

“**Avoidable Waste**” means wood material that meets or exceeds the Timber Merchantability Specifications that does not fall within the definition of unavoidable waste;

“**Batch**” means a grouping of one or more waste assessment areas selected from a population that have been selected to be surveyed;

“**BCTS**” means BCTS as defined in the *Forest Act*;

“**Bernoulli selection process**” means to sample cutblocks where each cutblock is selected individually for inclusion into the sample, using the same selection probability as in previous batches;

“**Breakage**” means any piece of a tree, meeting the minimum diameter set by the TMS, which has a gross length shorter than 3.0 m in length and is broken at the large end or broken at both ends. This definition is not consistent with the inventory definition of breakage nor is it intended to be;

“**Bucking Waste**” means a portion of a tree or log greater than the top diameter set by the TMS that is less than 3.0 m in length and which has been cut at the large or both ends. To be measured as bucking waste the piece must have originated from a tree or log at least 3.0 m in length;

“**Cardinal direction**” means North, South, East and West. All references to azimuths or bearings mean the “true” value;

“**Char**” or “**Charred Wood**” means wood (not bark) that has been reduced or severely weakened by combustion or extreme heat. Char has a broken or cracked appearance resembling alligator skin;

“**Cold deck**” means five or more grade 1, 2, 4 or 6 (grade 6 is only counted when required to be measured under the cutting authority document) logs that are mechanically placed together in a deck;

“**Conventional**” means any harvest method that does not use a helicopter;

“**Cruise Based**” means a cutting authority where under section 106 of the *Act* the stumpage payable is calculated using information provided by a cruise of the timber conducted before the timber is cut;

“**Road Permit**” means road permit as defined in the *Forest Act*;

“**Sampling Plan**” contains the waste assessment areas to be reported, the sampling methodology, and the other criteria that will be used to define the sample size;

“**Sample size**” means the number of samples included in a waste survey to meet the objectives of the Sample Plan;

“**Scale Based**” means a cutting authority where the stumpage payable is calculated using a scale of the timber;

“**Scorch**” or “**Scorched Wood**” means wood that is discoloured but wood fibres are smooth and there is little burn penetration into the wood. Scorch may also be used to describe fire damage where the bark is burnt but not the underlying wood;

“**SPIF**” (Starting Point Interval Factor) means a value determined on a monthly basis by the Ministry to be used by agreement holders to generate a random starting point for sampling grids. The SPIF will be randomly determined at 10% intervals ranging from 10 to 90%;

“**Slab**” means any non-round piece of timber that has fractured along a plane roughly parallel to the longitudinal axis of the original log that has a minimum thickness of 10 cm for at least 3.0m of its length and an average diameter equal to or larger than the TMS diameter;

“**South Area**” means Cariboo, Kootenay-Boundary and Thompson-Okanagan Regions;

“**Standing trees**” means trees authorized for harvest under the cutting authority (excepting reserved trees) but at the discretion of the licence holder are not cut and removed.

“**Stub (Stubbed) trees**” means the practice of harvesting or removing a portion of the tree so that part of the bole (stem) above stump height remains;

“**Stump**” means any piece of timber in which more than one half (1/2) of its original diameter is remaining, is less than 3.30 m in length and which has a cut top and is still attached to the roots;

“**Tie point**” means a falling corner. A specific point on the ground whose location is readily identifiable on a digital image, aerial photograph or map (i.e. road intersection, corner of a field or swamp, field located station) may be used if agreed to by the District and surveyor;

“**Timber Merchantability Specifications or TMS**” means the stump height and diameter, log top diameter, slab thickness and log length specified in this Manual;

“**Timber Pricing Branch or TPB**” means the Timber Pricing Branch of the Ministry;

“**Timber Pricing Branch website**” is:

<https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/forest-residue-waste>

“**Timber Sales Manager or TSM**” means the Timber Sales Manager or the Timber Sales

Appendix 10 Bucking Waste Grading Matrix and Field Card

Bucking Waste Grading Matrix

1. Pieces Less than 50% Sound

- a. Must meet Z Grade criteria as per the *Scaling Manual* section 9.5
- b. Measurement is not required.

2. Pieces Greater than 50% Sound

- a. Grade 6
 - i. Must meet Grade 6 requirements of the *Scaling Manual* section 9.1.3
 - ii. Measurement is **required** when specified in a cutting authority.
- b. Avoidable pieces

Avoidable pieces are classified by the location in the tree they were cut from: the top, the middle, or butt.

- i. **Top** – Pieces cut from the top of the tree with a cut butt greater than 5 rads (10 cm) and extend to the maximum utilization point 5 rads (10 cm).

1. Grade 4:

- a. Any piece with 1 or more checks to the heart, or
- b. One or more oversize knots, or
- c. Greater than 4 cm Spiral Grain, or
- d. **Greater than 25 percent of the length contains char.**

- ii. **Middle** – Pieces cut from the middle portions of the tree. No evidence of the felling cut or utilization top exist. The top must be greater than 6 rads (12 cm).

1. Grade 4:

- a. Any piece with 2 or more 4 cm deep checks, or
- b. 3 or more oversize knots, or
- c. Severe shatter, or
- d. Greater than 15% Spiral Grain, or
- e. **Greater than 25 percent of the length contains char.**

- iii. **Butt** – Pieces cut from the base of the tree which must include evidence of the felling cut.

1. Grade 4:

- a. Any piece with 3 or more 4 cm checks, or

- b. Severe shatter, or
- c. Greater than 15% spiral grain, or
- d. **Catface, or**
- e. 25-50% heart rot, or
- f. **Greater than 25 percent of the length contains char.**

Note: checks on green pieces can only be considered when present on a dead or dry side of the piece.

All pieces that are better than the top, middle, butt requirements are assigned Grade 1 or 2 as per the bucking card.

| Bucking Waste Grading Field Card | | | | |
|----------------------------------|-------------|---|---|---|
| | Waste Class | Piece Grade | Description | |
| <50% | A/U | Grade Z | No tally. <i>Scaling Manual</i> Section 9.5, must show rot at both ends. Contains 3/4 or 4/4 through running heart rot or hole. | |
| >50% | A/U | Grade 6 | Must contain evidence of felling cut. Lodgepole 15 cm (7.5R), other species <20 cm (10R) at 15 cm from the felling cut | |
| | U | Grade 1,2 | Class auditable, grade not auditable, non billable | |
| | | Grade 4 | Grade defined as below, non billable | |
| | A | SL (1,2) | | Sound/round, no severe defect or deformity, <3 checks, butt rot must be conical shape, slabs >7.5R |
| | | Top | Middle | Butt |
| | | 4 | | |
| | | 4 | | 2 or more checks >4 cm, >3 OS knots, severe shatter, >15% SG, >25% of the length contains char |
| | | | 4 | Shatter, >3 4 cm checks, >15% SG, catface , 25-50% heart rot, >25% of the length contains char |
| Piece Type | | Top = cut butt extending to utilization or broken top (<5R) Middle = cut or broken with no evidence of utilization top or felling cut Butt = piece includes evidence of felling cut | | |