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**MAR 31 2005**

**BY EMAIL**

To: Phil Zacharatos  
Regional Manager  
Southern Interior Forest Region

Jim Gowriluk  
A/Regional Manager  
Northern Interior Forest Region

From: The Honourable Michael de Jong  
Minister of Forests

Re: **Amendment No. 3 to the *Interior Appraisal Manual***

I hereby approve Amendment No. 3 to the *Interior Appraisal Manual*, and attach a copy for your use. The following sections have been amended.

Sections 2.2(4), (5) and (7)	Reference to forest technologists registered with the Association of British Columbia Forest Professionals is added.
Section 2.3.2.2:	The expiry date for blanket salvage permits issued prior to September 1, 2004, has been extended from April 30, 2005, to July 31, 2005.
Sections 2.4(3), (4) and (6)	Reference to forest technologists registered with the Association of British Columbia Forest Professionals is added.
Section 4.3.1.1:	Reference to the appendix is corrected.
Section 4.3.1.1.5:	Revised text is added which clarifies the intent of the extended road amortization section.
Section 6.6(3):	Added text to apply to Section 47.6(3) of the <i>Forest Act</i> .
Chapter 7:	Revised text includes reference to Section 47.6(3) of the <i>Forest Act</i> .
Section 7.1:	Revised text includes reference to Section 47.6(3) of the <i>Forest Act</i> .
Section 7.2.1:	Reference added to Section 47.6(3) of the <i>Forest Act</i> .
Section 7.5.1(5):	This change enables the upset stumpage rate for BC Timber Sales forestry licences to cut under Section 47.6(3) of the <i>Forest Act</i> to be set at the full market stumpage price.
Section 7.5.2:	Revised definition of the discount factor variable.
Appendix 1:	Typographical error corrected.



Phil Zacharatos and Jim Gowriluk

This amendment will come into force on April 1, 2005. Further amendments or revisions to this manual require my approval.



Dep. Minister  
Michael de Jong  
Minister

Attachment

pc: Bill Howard, Director, Revenue Branch

Interior Appraisal Advisory Committee





**FOR FURTHER INFORMATION CONTACT:**

Mike Falkiner  
Manager, Timber Pricing

Revenue Branch  
Ministry of Forests  
PO Box 9511 Stn Prov Govt  
Victoria, B.C. V8W 9C2

Phone: 387-8378  
Email: Mike.Falkiner@gems1.gov.bc.ca  
FAX: 387-5670

<b>MANUAL TITLE</b> Interior Appraisal Manual	
<b>REVISION No.</b> Amendment No. 3	<b>ISSUE DATE</b> April 1, 2005
<b>MANUAL CO-ORDINATOR</b>  Judy Laton Revenue Branch	
<b>AUTHORIZATION (Name, Title)</b>  W. Howard Director, Revenue Branch	

Please make the following changes to your copy of the above Ministry manual. Please insert the following specified pages and **file this notice** immediately after the Amendments Tab.

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT  TABLE OF CONTENTS	PAGE(S)	COMMENTS
REMOVE	Table of Contents	iii - iv	After Table of Contents Tab
INSERT	Table of Contents	iii - iv	
REMOVE	Chapter 2	3 - 4 7 - 10	After Chapter 2 Tab
INSERT	Chapter 2	3 - 4 7 - 10	
REMOVE	Chapter 4	9 - 12	After Chapter 4 Tab
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REMOVE	Chapter 6	9 - 10	After Chapter 6 Tab
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REMOVE	Chapter 7	1 - 4 9 - 12	After Chapter 7 Tab
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REMOVE	Appendix	A1 - A2	After Appendices Tab
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## 2.2 Appraisal Procedure

1. An appraisal is a process used to determine a stumpage rate for a cutting authority area using the *Interior Appraisal Manual* in effect on the effective date of the cutting authority.
2. A licensee or BC Timber Sales (BCTS) shall submit an interior appraisal data submission and map (Appendix IV) to the district manager when the licensee or BCTS makes an application for a cutting authority.
3. The licensee or BCTS shall submit to the district manager any other information required by the district manager or their designate for the purposes of the appraisal.
4. The submissions under subsections (2) and (3) of this section must be signed by a **registered professional forester (RPF) or registered forest technologist (RFT)**, registered **with the Association of British Columbia Forest Professionals**.
5. The district manager or their designate may review the licensee or BCTS submission and will notify the licensee or BCTS, in writing, of any omissions, errors or provisions of the *Interior Appraisal Manual* that, in the opinion of the district manager or their designate, the signing **RPF or RFT** may not have considered. The licensee or BCTS signing **RPF or RFT** will consider the district manager's or their designate's notification and may revise the submission.
6. The district manager or their designate shall give any information supplied by the licensee or BCTS under this section to the person who determines the stumpage rate together with any other information that the district manager or their designate considers relevant to the appraisal.
7. The person who determines the stumpage rate may review the licensee or BCTS submission and information supplied by the district manager or their designate, and will notify the licensee or BCTS, in writing, of any omissions, errors or provisions of the *Interior Appraisal Manual* that, in the opinion of the person who determines the stumpage rate, the signing **RPF or RFT** may not have considered. The licensee or BCTS signing **RPF or RFT** will consider the notification and may revise the submission.
8. The person who determines the stumpage rate shall consider, when determining the stumpage rate:
  - a. the information provided by the licensee or BCTS and the district manager or their designate, and
  - b. any information available to the person who determines the stumpage rate that is relevant to the appraisal.

9. Regional staff will notify the licensee of the total stumpage rate by way of a stumpage advisory notice. Regional staff will advise BCTS of the upset stumpage rate. Once the timber sale has been auctioned regional staff will notify the successful bidder of the total stumpage rate by way of a stumpage advisory notice. Regional staff will also provide the licensee or BCTS with a summary of the information used to determine the stumpage rate or upset stumpage rate.



2. A blanket salvage permit issued on or after September 1, 2004, must be reappraised at the anniversary date of the cutting authority. For blanket salvage permits issued prior to September 1, 2004, the appraisal expiry date may be extended to **July 31, 2005**.

### 2.3.2.3 Minister's Direction

1. The Minister of Forests may direct that a reappraisal be made at any time and that the redetermined stumpage rate be effective on any future date, and may specify criteria and procedures for the reappraisal.
2. A reappraisal directed by the Minister of Forests, may be a re-estimation of operating cost, lumber recovery factor, or selling price, or any combination of these, as may be directed by the Minister of Forests.

### 2.3.2.4 Mathematical Error

- a. If a government employee or contractor in the Ministry of Forests or a licensee (or employee or contractor of a licensee) becomes aware of what is or probably is a mathematical error in a stumpage determination, that person shall give written notice of the error ("the Notice") as follows:
  - i. in the case of appraisals and reappraisals, to the appropriate regional manager, and
  - ii. in the case of quarterly adjustments, to the director of Revenue Branch,
- b. the Notice shall describe the stumpage determination or determinations involved and shall describe the nature and cause of the error to the extent reasonably possible,
- c. upon receipt of the Notice, the regional manager or the director of Revenue Branch shall make the appropriate investigation to decide whether or not an error has, in fact, been made,
- d. if the regional manager or the director of Revenue Branch decides that an error has not been made, they shall notify the person who sent the Notice of the decision and the reasons for it,
- e. if the regional manager or director of Revenue Branch, decides that an error has been made, the following shall occur:
  - i. the regional manager or the director of Revenue Branch, shall notify the person who sent the Notice of the decision and the reasons for it,

- ii. the regional manager or the director of Revenue Branch, shall take reasonable steps to ensure that all licensees who have been affected by the error are informed of the Notice and of the nature and cause of the error,
  - iii. the cutting authority or authorities under which the error was made shall be reappraised or the quarterly stumpage adjustment recalculated to correct the error unless the cutting authority, the *Interior Appraisal Manual* or the application in tender for a timber sale licence specified that the stumpage rate is fixed, and
  - iv. the effective date of the redetermined rate shall be the first day of the month following the date on which the Notice was received by the regional manager or the director of Revenue Branch,
- f. if an error has occurred and no Notice has been given with respect to it, the Notice shall be deemed to have been given on the date on which the regional manager or the director of Revenue Branch, became aware of the error or probable error,
- g. no person who discovers or otherwise becomes aware of a mathematical error in a stumpage determination shall be obliged to send the Notice as required herein if that person, on reasonable grounds, believes that someone else has sent the Notice with respect to the same error,
- h. the redetermined rate does not apply to timber scaled before the first of the month following the date upon which the Notice was given. No remedy will be available with respect to timber scaled before the first of the month,
- i. in this section, a mathematical error is any of the following:
- i. an error in transcribing or compiling approved cruise field data, or in the application of approved loss factors and taper equations,
  - ii. an error in a calculation made as part of the appraisal data submission,
  - iii. an error in transcribing the data from an approved appraisal data submission or in performing the calculation specified in the manual, and
  - iv. an error in the application of published appraisal parameters,

A difference between cruise estimates and actual timber quality or quantity does not constitute an error in the appraisal.

A difference between appraisal estimates of selling price or operating cost and the licensee's experience does not constitute an error in the appraisal.

Omission of data by the licensee on an approved appraisal data submission does not constitute an error in the appraisal.

## 2.4 Changed Circumstance Reappraisal Procedure

1. The licensee shall submit to the district manager an interior appraisal data submission and map if the cutting authority area must be reappraised because of a changed circumstance under section 2.3.2.
2. The licensee shall submit to the district manager any other information required by the district manager or their designate for the purposes of the appraisal.
3. The submissions under subsections (1) and (2) of this section must be signed by a **registered professional forester (RPF) or registered forest technologist (RFT)**, registered **with the Association of British Columbia Forest Professionals**.
4. The district manager or their designate may review the licensee's submission and will notify the licensee, in writing, of any omissions, errors or provisions of the *Interior Appraisal Manual* that, in the opinion of the district manager or their designate, the signing **RPF or RFT** may not have considered. The licensee's signing **RPF or RFT** will consider the district manager's or their designate's notification and may revise the submission.
5. The district manager or their designate shall give any information supplied by the licensee under this section to the person who determines the stumpage rate together with any other information that the district manager or their designate considers relevant to the appraisal.
6. The person who determines the stumpage rate may review the licensee's submission and information supplied by the district manager or their designate, and will notify the licensee, in writing, of any omissions, errors or provisions of the *Interior Appraisal Manual* that, in the opinion of the person who determines the stumpage rate, the signing **RPF or RFT** may not have considered. The licensee's signing **RPF or RFT** will consider the notification and may revise the submission.
7. The person who determines the stumpage rate shall consider, when determining the stumpage rate:
  - a. any information provided by the licensee and the district manager or their designate, and
  - b. any information available to the person who determines the stumpage rate that is relevant to the reappraisal.
8. Regional staff will notify the licensee of the reappraised stumpage rate in the form of a stumpage advisory notice and will provide the licensee with a summary of the information used to determine the reappraised stumpage rate.

**2.4.1 Effective Date of Changed Circumstance Reappraisal**

1. The effective date of the reappraisal under section 2.3.2 is the first day of the month following the date of the licensee's written request to the district manager or the district manager's notification to the licensee that a changed circumstance has occurred unless the reappraisal is because of:
  - a. amendments to the cutting authority exhibit A area under subsection 2.3.2(1)(c), in which case the reappraisal is effective on the first day of the month following the date that the district manager notifies the licensee of the amendment approval, or
  - b. sudden and severe damage to the appraised timber under subsection 2.3.2(1)(d), in which case the effective date of the reappraisal is the first day of the month following the date when the sudden and severe event stopped on the cutting authority area..

**2.4.2 Minister Directed Reappraisal Procedure**

1. The licensee shall submit to the district manager an interior appraisal data submission, if requested by the district manager or their designate, within forty-five days of the minister's direction.
2. Thereafter, the ministerial direction reappraisal procedure shall be the same procedure as that required by subsections 2.4 (2) through 2.4 (8).

#### 4.3.1.1 Development Cost Allocation

Where proration is required for section 4.3.1.1.1, 4.3.1.1.2 and 4.3.1.1.3:

$$\text{Crown Share} = \text{Total Estimated Cost} * \frac{\text{Appraised Timber Volume}}{\text{Total Timber Volume}}$$

Where:

Crown Share (\$)	=	Dollar amount to be allocated to stumpage-bearing timber in the cutting authority being appraised.
Total Estimated Cost (\$)	=	Dollar amount of the total development cost estimate.
Appraised Timber Volume (m <sup>3</sup> )	=	Volume of Crown timber that is tributary to the project and under the control of the licensee or a company legally associated with the licensee, including volume in all areas contributing to the allowable annual cut determination.
Total Timber Volume (m <sup>3</sup> )	=	Total volume of Crown and private timber that is tributary to the project and under the control of the licensee or a company legally associated with the licensee.

In all cases volumes are estimated from the latest approved operational or inventory cruise data and maps of the area within the drainage to the height of land.

The Crown share is a dollar amount which is included in the appraisal of a tributary cutting authority, subject to section 4.3.1.1.5.

Development cost estimate is allocated according to the outline below (see also Appendix II).

##### 4.3.1.1.1 Development Cost Estimates on Crown Lands

1. Development providing access to appraised timber only:

Total estimated costs are included in the appraisal.

2. Development providing access to non-appraised timber only:

Cost estimates are not included in the appraisal.

3. Development in appraised timber areas providing access to both appraised and non-appraised timber held by the licensee or a company legally associated with the licensee:

All costs are prorated between appraised and non-appraised timber. The appraised timber portion is then included in the appraisal.

#### **4.3.1.1.2 Development Cost Estimates for Full Appraisal on Timber Licence (TL) Cutting Authorities**

New development will be allocated as in section 4.3.1.1.1.

#### **4.3.1.1.3 Development Cost Estimates on Private Land**

When a new or reconstructed road or structure on private land is required for Crown timber extraction, the estimated cost of the road or structure will be included in the appraisal of a tributary cutting authority according to the procedures of section 4.3.1.1 and the following guidelines:

1. Development provides access to appraised timber only:

The total estimated costs are included in the appraisal.

2. Development provides access to non-appraised timber only:

Cost estimates are not included in any appraisal.

3. Development provides access to both non-appraised and appraised timber.

All cost estimates are prorated between non-appraised and appraised timber (section 4.3.1.1) and then the Crown portion is included in the appraisal.

#### **4.3.1.1.4 Existing Roads and Structures**

The following are defined as existing roads for the cutting authority being appraised and are not eligible for inclusion in development cost estimates:

1. Costs of constructed roads that have been previously considered in appraisals of Crown timber within another cutting authority.
2. Roads previously constructed and used to haul non-appraised timber (excluding right-of-way).
3. Roads previously constructed all or in part for purposes unrelated to logging the cutting authority area being appraised.
4. Roads previously constructed, repaired or reconstructed on private land before August 1, 1996.

Winter roads over muskeg or organic soils that use snow and ice for a driving surface are not considered as existing roads.

5. If the existing road requires reconstruction or replacement after August 1, 1996, the cost estimate is made as described in section 4.3.1. If the existing road is on private land, road and land use charges may be recognized as described in section 4.7.

A road on private land that has previously been included in an appraisal because it was required for only short term timber extraction (as per previous policy) shall continue to be included upon reappraisal.

#### **4.3.1.1.5 Extended Road Amortization**

For new appraisals where the development cost estimate for roads accessing more than one tributary cutting authority exceeds \$4.00 **per cubic metre**, a written agreement may be made **between the licensee and the regional manager**, which distributes a portion of the development cost estimate to two or more tributary cutting authorities.

The agreement is subject to the following conditions:

1. **Future tributary timber included in the extended road amortization agreement must be in an approved cutting permit or cutblocks shown in the licensee's forest development plan, woodlot licence plan or forest stewardship plan in effect on the appraisal effective date.**
2. The road portion that may be included in the agreement ends at the far boundary of the first cutting authority being appraised.
3. **The agreement must indicate the cost estimate that is being distributed to each cutting authority.**
4. The agreement must be signed by the licensee and the regional manager or the regional manager's designate.
5. The total lump sum costs may be adjusted once at reappraisal provided no harvest has occurred on any cutting authority included in the agreement
6. The costs apportioned to each cutting authority under the agreement may be adjusted once, in conjunction with section 4.3.1.1.5,(4), at reappraisal using the same ratio for distributing the costs as in the original agreement. The adjustment can only be made where no harvest has occurred on any cutting authority included in the agreement.
7. The agreement confers no obligation on the Crown to compensate licensees for any unamortized costs.

#### **4.3.2 Tabular Cost Estimates**

These roads are generally a single lane width with turnouts. These roads may or may not be stabilized (ballasted or surfaced) with additional materials.

#### 4.3.2.1 Subgrade Construction

The subgrade construction cost estimate includes:

- clearing,
- grubbing,
- stripping,
- debris disposal,
- stump removal,
- ditch construction,
- turnout construction (not landings),
- material costs, and
- installation of culverts with diameters up to 950 mm or the equivalent cross-section area or single log abutment culverts up to 3.4 m span.

Right-of-way felling and logging is excluded.

#### 4.3.2.2 Subgrade Construction Variables

For appraisal purposes the following subgrade construction variables are recognized:

1. Section length: (L)

Road sections are recorded in multiples of 0.1 km. Each section should be representative of a single moisture class. Each section should be 1 km or longer, although some individual section lengths less than 1 km but greater than 0.1 km are acceptable for extreme variations of slope or percent rock. The section length includes that portion traversing through landings. For ground skidding, short roads (up to and including 100 m long) that access single landings are included in the tree-to-truck cost estimates (section 4.4) and are not eligible for development cost estimates.

2. Road Type:

- **Snow/Ice Road (WINTER):** - A single lane seasonal road including turnouts, with a flat road profile that is built with a combination of snow, ice and dirt, on a surface that may or may not have been stumped. The driving surface is built up using multiple layers of snow and ice such that extra stabilizing material costs are not applicable. A flat road profile means the side slope is less than or equal to 15% and there is minimal side cut. Minimal means, cuts into mineral or organic soil must not exceed 0.5 m in depth for distances up to 0.1 km. Seismic lines being used for roads, that have not previously been used as roads, will be considered as new construction and qualify as snow/ice roads provided they fall within the above criteria.
- **Operational Road (OP):** - A single lane road with turnouts, which does not meet the definition of a snow/ice road or a block road. Is generally built under the authority of a road permit but portions may be constructed under the cutting authority. An operational road exists within a cutblock when the road accesses



## 6.6 BC Timber Sales (BCTS)

1. For appraisal purposes, the BCTS includes:
  - All timber sale licenses issued under the *Forest Act*, sections 20, and
  - all forestry licences to cut issued under the *Forest Act*, section 47.6(3).

### Adjustable Stumpage Rates

2. The adjustable stumpage rate option can only be provided to a licensee if the upset rate has been determined by means of a full appraisal and the timber sale licence was advertised before November 1, 2003. The data for the full appraisal may be site-specific or may be obtained from a comparable cutting authority. For cutting authorities with volumes greater than 5 000 m<sup>3</sup>, refer to section 4.2.1. For cutting authorities with 5 000 m<sup>3</sup> or less, comparative cruise data will be chosen following procedures set out in section 2.1.2.3 of the *Cruising Manual*.

### Fixed Stumpage Rates

3. All timber sale licences awarded under section 20 of the *Forest Act* that were advertised on or after November 1, 2003 **and forestry licences to cut awarded under section 47.6 (3) of the *Forest Act*** will have fixed stumpage rates.

If the zonal average sawlog stumpage rate method is used, the upset and hence the total stumpage rate is fixed for the term of the cutting authority and all extensions. The only exceptions are if a reappraisal is done under section 2.3.2.1(d) due to sudden and severe damage or section 2.3.2.3 because of a minister's direction.

A licensee's election of fixed stumpage rates also precludes any correction to the upset stumpage rate determination that would otherwise be warranted because of an error in the appraisal.

## **6.7 Levies (CVP only)**

### 1. Silviculture Levy:

A silviculture cost estimate is made for every cutting authority that will require basic silviculture, including those with a volume of less than 2 000 m<sup>3</sup>.

A basic silviculture levy may be added to the reserve stumpage rate. The levy is equal to the district manager's cost estimate of silviculture liability to be incurred by the Crown.

### 2. Development/Administration Levy:

- a. A development levy may be added to the reserve stumpage rate. The development levy is equal to the appraisal cost estimate of road construction provided by the Crown as approved by the regional manager.
- b. An administration levy may be added to the reserve stumpage rate. The administration levy is equal to the district manager's cost estimate of administration provided by the Crown for preparing a Forestry Licence to Cut for salvage timber. An administration cost estimate is made for every cutting authority where the district office has to prepare all details of a Forestry Licence to Cut for salvage. No levy is applicable to professional applications.

The amount of any levy may be re-determined at reappraisal only.

# Market Pricing System

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# 7

The market pricing system (MPS) policy provided in this chapter is to be used only for licences awarded under sections 20, 21 and 47.6 (3) of the *Forest Act*.

Chapters 3, 4, 5 and 6 of this manual are only to be used, for licences awarded under sections 20, 21 and 47.6 (3) of the *Forest Act*, where directly referenced in chapter 7.

## **7.1 MPS Introduction**

The market pricing system is the basis for determining sawlog stumpage rates for timber sale licences issued under section 20 and 47.6 (3) of the *Forest Act*, subject to a minimum stumpage rate. Sections 2.1 (3) and (4) of this manual provide the methods that are used for deriving stumpage rates for specific products and extraordinary situations.

MPS is a method of estimating the stumpage value of a stand of timber based on the results of previous similar timber stands that were sold competitively.

MPS can only be used where complete appraisal data as per section 4.2 is available for the cutting authority area. Where data is not available see chapter 6 of this manual.

The MPS upset rate and bonus bid applies to coniferous sawlogs only. All deciduous species, special forest products and grade 3, 4, 5 or 6 logs have a default price listed under section 6.8.

## 7.2 MPS Principles and Procedures

### 7.2.1 MPS Appraisals

The upset stumpage rate will be calculated using the *Interior Appraisal Manual* and monthly parameters (selling prices and consumer price index (CPI)) in effect on the date of calculating (appraisal effective date). This rate plus the bonus bid remains in effect from the date of award of the sale until the sale expires. All MPS stumpage rates on Section 20 timber sale licences advertised on or after November 1, 2003 and **Forestry Licences to Cut awarded under section 47.6 (3) of the *Forest Act*** are fixed for the term of the timber sale and all extensions.

### 7.2.2 MPS Stumpage Adjustments

For cutting authorities that were advertised prior to November 1, 2003, that elected to have, or have adjustable stumpage rates, the stumpage rates are adjusted quarterly on January 1, April 1, July 1, and October 1, of each year.

At the time of the quarterly adjustment, the MPS upset rate will be re-calculated based on the equations applicable for the appraisal effective date and the cutting authority data. The monthly parameters effective for the month of the adjustment will be used in the calculation instead of the original values. All other data remain unchanged.

This process is repeated quarterly until the cutting authority is reappraised.

### 7.2.3 Reappraisals for MPS Appraisals

Revised data and revised monthly parameters will be used with the equations in effect on the reappraisal date. Any reappraisal will follow the policy direction of chapter 2 of this manual. The original bonus bid remains in effect.

### 7.2.4 Methodology

Calculating the upset stumpage rate for BC Timber Sales, issued under section 20 of the *Forest Act*, will be done using the following methodology:

1. Calculate a selling price (SP) of the products that can be recovered from the stand using sections 7.3.1 and 7.3.2 with the variables as defined.
2. Calculate the market stumpage price using the equation in section 7.4.2, the variables for the stand, and the SP calculated in section 7.3.

3. Calculate the upset stumpage rate by discounting the market stumpage price calculated in section 7.4.2 using the discount factor in section 7.5.

One stumpage rate is determined for all appraised coniferous sawlogs in each cutting authority area. Other products are priced using miscellaneous stumpage rates as specified under section 6.8.

## 7.4.2 Market Stumpage Price Equation

Using the variables defined in section 7.4.1, the selling price calculated in section 7.3.2 and the equation below, calculate the market stumpage price (MSP).

$$\begin{aligned} \text{MSP} = & [44.1590 + 0.1895 * \text{SP/CPIF} - 0.9615 * \text{DC/CPIF} + 0.1747 * (\text{VOL}/1000) \\ & - 0.1327 * \text{S}\% + 9.0319 * \ln(\text{VPT}) + 0.009378 * \text{VPH} - 12.7571 * \\ & (\text{BWDN}\%/100) - 7.7502 * (\text{CY}\%/100) - 35.8595 * (\text{HP}\%/100) - 9.7689 * \\ & (\text{HORSE}\%/100) - 21.9802 * (\text{BURN}\%/100) - 2.0871 * \text{CYCLE} - 7.8954 * \\ & \text{HECE} + 29.5252 * (\text{WH}\%/100) - 7.9152 * \text{Z9} - 5.4166 * \text{SAL} - 0.5179 * \\ & (1/\text{VPT})] * \text{CPIF} \end{aligned}$$

For the above equation the following definitions apply:

1. If the percentage of hemlock, balsam and cedar volume in the cutting authority is greater than or equal to 50 percent of the total net cruise coniferous volume, then HECE = 1, otherwise enter 0.
2. If the selling price zone is Fort Nelson Peace (9) then Z9 = 1, otherwise enter 0.
3. If the total net cruise coniferous volume is greater than 50 000, then VOL = 50 000.
4. If horse or helicopter log appraisals, then VPT = 0.5490.
5. Where for salvage (SAL):
  - a. greater than one-third of the net cruise volume for the cutting authority has been physically damaged by ice storm, blowdown, fire, snow press, or
  - b. greater than one-third of the net cruise volume for the cutting authority has been attacked by mountain pine beetle, or other forest pests, that will result in the death of the attacked trees within one year, as determined by the district manager. Salvage (SAL) shall be = 1, or
  - c. except as provided in subsection 5 (a) and (b) SAL shall be = 0.

## 7.5 MPS Stumpage Rate

### 7.5.1 MPS Upset Stumpage Rate

1. Subject to subsections (2) (3) (4) (5) and (6) the upset stumpage rate that is determined using the MPS shall be seventy percent of the market stumpage price.
2. Where applications for a timber sale licence with an upset stumpage rate determined under section 7.5.1 (1) have been invited but no applications have been received, the upset stumpage rate shall be equal to the variable cost per cubic metre of preparing the timber for sale when that is requested by the BC Timber Sales manager.
3. Where the director of BC Timber Sales does not anticipate that applications for a timber sale licence with an upset stumpage rate determined under section 7.5.1 (1) will be received because of market conditions, the upset stumpage rate shall be equal to the variable cost per cubic metre of preparing the timber for sale when that is requested by the BC Timber Sales manager.
4. The upset stumpage rate for timber that has been decked for over three years, as determined by the BC Timber Sales manager, shall be equal to the prescribed minimum stumpage rate when that is requested by the BC Timber Sales manager. The deck shall be auctioned by bonus offer.
5. The upset stumpage rate for a cutting authority issued under section 47.6 (3) of the *Forest Act* shall be the market stumpage price for that cutting authority.
6. The variable cost per cubic metre of preparing the timber for sale shall be calculated by the BC Timber Sales manager.
7. Notwithstanding anything contained in this section the upset stumpage rate must not be lower than the prescribed minimum rate.

### 7.5.2 Upset Stumpage Rate Calculation

The upset stumpage rate (USR) is calculated by multiplying the Market Stumpage Price (MSP) by the difference between 1 and the discount factor (DF) as follows:

$$\text{USR} = \text{MSP} * (1-\text{DF})$$

Where:

USR	=	Upset stumpage rate
MSP	=	Market Stumpage Price as defined in Section 7.4.2
DF	=	0.00 if section 7.5.1 (5) applicable, otherwise DF = 0.30



**7.5.3 Prescribed Minimum Stumpage Rate**

The minimum stumpage rate is prescribed by the minimum stumpage rate regulation (BC Regulation 354/87). The current minimum stumpage rate is \$0.25 per cubic metre.

**7.5.4 Total MPS Stumpage Rate**

The total stumpage rate is the upset stumpage rate plus any bonus bid.

## **7.6 Deciduous and Miscellaneous Forest Products**

The stumpage rates for deciduous sawlogs, all species grade 3, 4, 5 and 6 logs and other miscellaneous forest products are found in section 6.8.

# **Appendices**

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## Appendix I Equipment and Labour Rates

(Cost Base July 1, 2001)

MACHINE DESCRIPTION	TYPICAL MODEL	\$/HOUR
Crawler Tractor	Cat D9R, Komatsu D275/355	249.10
Crawler Tractor	Cat D9N (years: 1993 thru 1997)	236.20
Crawler Tractor	Cat D8N, Komatsu D155AX-3	186.25
Crawler Tractor	Cat D7R, Liebherr PR742, Fiat Allis FD255	151.65
Crawler Tractor	Cat D6M, Fiat Allis FD175, Komatsu D58E	129.10
Crawler Tractor	Cat D5C, JD 650G	98.35
Rock Drill (includes labour)	Compressor: 750 cfm on tank chassis	206.01
Grader	Cat 14H, Komatsu GD750	112.90
Front End Loader (Gravel)	Cat 970F, Komatsu WA450-3, Case 921	140.65
Front End Loader (Logs)	Cat 972G, Kawasaki 90Z, Volvo L180C/D	163.15
Hydraulic Excavator incl. Brush Guard & Thumb	Hitachi EX400-3, Komatsu PC400LC	238.70
Hydraulic Excavator incl. Brush Guard & Thumb	Cat 330BL, Case 9050B, Link Belt 4300Q	196.41
Hydraulic Excavator incl. Brush Guard & Thumb	Hitachi EX300LC, Kobelco SK300LC	173.14
Hydraulic Excavator incl. Brush Guard & Thumb	Cat 325BL, Hitachi EX270LC, JD 270LC	158.62
Hydraulic Excavator incl. Brush Guard & Thumb	Cat 322BL, Komatsu PC220LC-6, JD 230LC	146.58
Hydraulic Excavator incl. Brush Guard & Thumb	Cat 320BL, Hitachi EX200LC-5, JD 200LC	136.90
Gradall	Gradall G1000, XL5200	158.50
Logging Truck (Highway)	All Triaxle	90.60
Logging Truck (Off Highway)	All (note: 1998 rate trended forward)	138.21
Self Loading Log Truck	Highway log truck + 4.5 t deck crane	103.80
Gravel Truck	10.7 m <sup>3</sup>	78.93
Gravel Truck Articulated (labour included)	25 - 29 tonne: Cat D30C/D, Terex 2766/3066	123.65
Lowbed	5 axle unit: tandem tractor and lowbed	81.50
Lowbed	150 tonne (same as Off-Hwy Truck)	138.21
Concrete Mix Truck	6.1 m <sup>3</sup>	87.60
Concrete Vibrator (labour not included)	5 m <sup>3</sup>	4.18
Concrete Mixer (labour not included)	0.17 m <sup>3</sup>	6.66
Crane - Truck Mounted	18 tonne	93.70
Soft Track Skidder	KMC 2100/2400	137.75
Rubber Tired Skidder	Cat 515, Clark H-66-G, JD 548-G	94.60
Vibrator Compactor	Cat 515 plus 2.7 t to 3.6 t roller	107.15
Tractor and Grid Roller	Cat 515 plus grid roller	108.05
Labourer	Includes 40% payroll loading	30.16
Roadman	Includes 40% payroll loading	30.41
Crib/Culvert Maker, Powderman	Includes 40% payroll loading	31.93
Landingman	Includes 40% payroll loading	32.35
Rockdriller & Powderman (for load & blast only)	Includes 40% payroll loading	69.53
Bridgeman	Includes 40% payroll loading	38.35
Powersaw (labour not included)	All	4.70
Faller, including powersaw cost	Includes 40% payroll loading	58.59

Sources:

Cost surveys, B.C. Road Builders & Heavy Construction Association, Equipment Rental Rate Guide (rates based on a 3 year old machine), and IWA agreement rates including payroll loading.

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