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Ministry of Forests and Range Minister's Office

MEMORANDUM

File: 280-30
Ref: 124148

APR 2 9 2010

To: Madeline Maley, A/Regional Executive Director, Southern Interior Forest Region
Bill Warner, Regional Executive Director, Northern Interior Forest Region

From: The Honourable Pat Bell
Minister of Forests and Range

Re: Amendment No. 12 to the *Interior Appraisal Manual*

I hereby approve Amendment No. 12 to the *Interior Appraisal Manual* and attach a copy for your use. The following sections have been amended:

Section 1.1	Definition added for Executive Director, Field Operations. Definition for Effective Date reorganized in alphabetical order. Definition revised for Revenue Branch to reflect name change.
Section 2.3(1)	Revision to allow for an alternate adjustment date to be specified by the Minister.
Section 4.1.1	Removal of Carnaby as Point of Appraisal in Table 4-1 due to expiry. Expiry date added for Kamloops.
Section 4.3.1.1.4	Revised text for clarification for extended road amortization agreements for cutting permits issued for a woodlot issued after November 30, 2008.
Section 4.3.2.6	Text added for clarity.
Section 4.3.3 (8)(e)	Subsection removed due to redundancy.
Section 5.6.4	Revision for consistency.
Table 6-1, 6-1a, 6-2 and 6.3	Tables updated with new average sawlog stumpage rates by forest zone and species.
Table 6-4	Line break inserted.

Section 6.7	A new situation added for Forestry Licences to Cut issued under Section 47.6(3) of the *Act* in conjunction with a BCTS Road Development Contract.
Section 7.4.1	Section reference updated.
Section 7.5.1	Revision to reflect title change.

This amendment will come into force on May 1, 2010. Further amendments or revisions to this manual require my approval.

Pat Bell
Minister
Attachment

pc: Murray Stech, Director, Pricing Branch

Ministry of
Forests
and Range

MANUAL REVISION TRANSMITTAL

FOR FURTHER INFORMATION OR IF YOU HAVE A CHANGE OF ADDRESS, PLEASE CONTACT:	**MANUAL TITLE** Interior Appraisal Manual	
Bob Bull Senior Timber Pricing Forester (Interior) Revenue Branch Ministry of Forests 1st Floor, 1520 Blanshard Street Victoria, BC V8W 3K1 Phone: 250-356-7709 Email: Bob.Bull@gov.bc.ca FAX: 250-387-5670	**AMENDMENT** Amendment No. 12	**ISSUE DATE** May 1, 2010
	MANUAL CO-ORDINATOR Judy Laton Manuals Co-ordinator	
	AUTHORIZATION (Name, Title) Murray Stech Director, Revenue Branch	

Please make the following changes to your copy of the above Ministry manual.

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT TABLE OF CONTENTS	PAGE(S)	COMMENTS
Remove	Table of Contents	v - vi	After Table of Contents Tab
Insert		v - vi	
Remove	Chapter 1	3 - 6	After Chapter 1 Tab
Insert		3 - 6	
Remove	Chapter 2	7 - 8	After Chapter 2 Tab
Insert		7 - 8	
Remove	Chapter 4	3 – 4, 9 – 10 19 – 20, 23 – 24	After Chapter 4 Tab
Insert		3 – 4,9 – 10 19 – 20, 23 – 24	
Remove	Chapter 5	7 - 8	After Chapter 5 Tab
Insert		7 - 8	
Remove	Chapter 6	1 – 4, 13 – 14 17 - 20	After Chapter 6 Tab
Insert		1 – 4, 13 – 14 17 - 20	
Remove	Chapter 7	7 – 8, 11 - 14	After Chapter 7 Tab
Insert		7 – 8, 11 - 14	
Remove	Index	1 - 2	After Index Tab
Insert		1 - 2	
INSERT	Letter from Minister and Transmittal Sheet		After Amendments Tab

Tables

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"Bonus Bid" means a bonus bid described in section 103(1)(d) of the *Act*,

"Bonus Offer" means a bonus offer described in section 103(2) of the *Act*,

"Chipped" means having been cut into small pieces by a chipper,

"Coniferous cruise volume" means that part of the total net cruise volume which is coniferous timber,

"Cutting Authority" means:

1. A cutting permit issued under:
    a. a forest licence,
    b. a timber sale licence that provides for the issuance of cutting permits,
    c. a tree farm licence,
    d. a community forest agreement,
    e. a woodlot licence,
    f. a timber licence,
    g. a community salvage licence,
    h. a master licence to cut, or
    i. a forestry licence to cut.
2. A timber sale licence under which cutting permits have not or will not be issued.
3. All other licences to cut.
4. A road permit.

"Cutting Authority Area" means the area where timber may be harvested under a cutting authority, which has a unique timber mark,

"Deciduous timber" means timber that is not of a coniferous species,

"Decked timber" means timber that has been 100% decked at roadside,

"Director" means director of Revenue Branch Ministry of Forests and Range,

"District Manager" means:

a. Except as provided in paragraph (b) of this definition, the district manager or district manager's designate.

b. Where the cutting authority area being appraised or reappraised is located in a controlled recreation area designated under the *Resort Timber Administration Act*, (RTAA) then district manager means an employee of the Ministry of Tourism, Culture and the Arts to whom the minister of that ministry has delegated the minister's powers and duties under section 2 of the RTAA.

"Effective Date" means, unless otherwise specified in the manual,

i. the date the stumpage rate is determined when required for advertising for competitive award, or

ii. the effective date of the cutting authority when the stumpage rate is determined for a cutting permit or a direct award licence.

"Executive Director, Field Operations" means the Executive Director, Field Operations or Executive Director, Field Operations' designate.

"Fully Appraised" means stand data (site specific or borrowed) has been used by the general appraisal system to calculate an indicated stumpage rate or has been included in an appraisal for a BCTS cutting authority including appraisals where the upset rate was set at the variable cost to prepare the timber for sale,

"Hogged" means tree residues or by-products that have been shredded into smaller fragments by mechanical action.

"Licensee" means the holder of a cutting authority,

"Manual" means *Interior Appraisal Manual*,

"Minister" means Minister of Forests and Range,

"Ministry" means Ministry of Forests and Range,

"New Construction" means the following construction phases: subgrade construction, placement of additional stabilizing material and the construction and installation of drainage and other pertinent structures,

"Partially Harvested Timber" means timber that has been felled and/or bucked and not yet forwarded to roadside.

"Prescribed Minimum Stumpage Rate" means the minimum stumpage rate prescribed by the minimum stumpage rate regulation (BC Regulation 354/87).

"Reconstruction and Replacement" means replacement or structural repair of a major drainage structure (e.g., replacing stringers, cross ties, or cribbing), or major resurfacing, which means resurfacing sections of more than 0.3 km in length that were initially surfaced but have deteriorated due to long term wear and tear, where stabilizing material was not previously used, or major reconstruction, which means restoring at least 0.1 km of road (per occurrence) that requires complete rebuilding of the subgrade,

"Regional Manager" means regional executive director or regional executive director's designate,

"Regulations" means regulations under the *Act*,

"Remedial Fences and Wing Fences" means fencing that is required to remedy, reduce or manage the impact of timber harvesting activities on range management,

"Revenue Branch" means the Pricing Branch of the Ministry,

"Road Permit" means road permit or road timber mark,

"Skidder Swing" means situations where two of the different harvest methods as listed in section 4.4.1 are required to move timber to an existing road or landing where it can be loaded onto a haul truck. Where skidder swing is included in an appraisal the harvest method that moves the felled timber first is the method that is indicated in the appraisal data submission,

"Salvage" except as provided in section 6.4, means a cutting authority area where greater than one-third of the net coniferous cruise volume is attacked by mountain pine beetle or other pests,

"Species Net Volume" is the species net volume reported in the appraisal summary report from the cruise compilation for the cutting authority area,

"Stud Log Percent" means the net volume of 5 m logs with top diameters under 20 cm expressed as a percentage of the total net cruise volume. The stud log percent is rounded to the nearest whole percentage point,

"Stumpage Appraisal Parameter" means:

a. Interior average market price,
b. Interior base rate,
c. Interior mean value index,
d. BC Consumer Price Index,
e. US Dollar Exchange rate,
f. Lumber and Chip Average Market Values,
g. Interior Basic Silviculture Costs by Species.

"Suitable Secondary Structure" means suitable secondary structure as defined in Section 1(4) of the *Forest Planning and Practices Regulation*.

"Timber Sales Manager" means the Timber Sales Manager or the Timber Sales Manager's designate,

"Total Net Coniferous Volume" is the total of the species net volumes for all coniferous species on the cutting authority area,

"Total Net Cruise Volume" means the sum of the species net cruise volumes reported in the appraisal summary report from the cruise compilation for the cutting authority area,

"Total Net Deciduous Volume" is the total of the species net volumes for all deciduous species on the cutting authority area,

"Tributary Cutting Authority Area" means a cutting authority area from which timber must be transported over the road that is developed, or a cutting authority area to which bulk fuels, supplies, equipment and harvesting crews necessary to carry out the day-to-day harvesting activities on that area must be taken on a regular basis over the road that is developed,

ii. Recompile the cruise data that was in the cruise in the original ADS.

d. If a cutting authority area is reappraised in accordance with section 2.2.1.1 and the effective date of the changed circumstance reappraisal is prior to a reappraisal for that cutting authority area under section 2.2.3, then cutting authority area shall be reappraised subsequent to the changed circumstance reappraisal using only the same information and effective date as the original reappraisal under section 2.2.3 (except for information that has changed as a result of the changed circumstance reappraisal under section 2.2.1).

e. Notwithstanding any other paragraph of this section, other data must be changed if it is required by the manual in effect at the time of the reappraisal and was not submitted in the original ADS.

2.2.3.1 Insect Damage Reappraisal Procedure

1. The insect damage reappraisal procedure is the procedure required by section 2.1(2) through 2.1(7).

2.2.3.2 Effective Date of an Insect Damage Reappraisal

1. The effective date of an insect damage reappraisal is the first day of the month following the month in which the District Manager receives the revised appraisal data submission.

2.3 Stumpage Adjustments

1. Unless otherwise specified in this manual or by the Minister, stumpage rates are adjusted quarterly on January 1, April 1, July 1, and October 1, of each year.

2. Each quarterly stumpage adjustment will be calculated using stumpage appraisal parameters.

3. The adjusted stumpage rates reflect changes in estimated selling prices and lumber recovery factor update add-ons (as authorized in this manual since the previous adjustment), and the recalculated logging and silviculture costs based on the appropriate trend factors shown in section 4.11. The manufacturing costs used in the adjustment will be those authorized in this manual since the previous adjustment. In addition, the adjustment reflects changes in the Interior Average Market Price and the Interior Base Rate and the Interior Mean Value Index.

4. Woodlot Adjustable Stumpage Rates:

    a. Except as provided in Appendix VI the stumpage rate for a cutting authority issued under a woodlot licence shall be an adjusting stumpage rate unless:

        (i) the stumpage rate for the cutting authority is changed to a non-adjusting stumpage rate under this subsection, or

        (ii) the cutting authority is a road permit, or blanket salvage cutting permit, or

        (iii) the stumpage rate has been determined under sections 6.1.2, or 6.6.

    b. A licensee may choose to have an adjusting stumpage rate changed to a non-adjusting stumpage rate under this subsection by giving written notice to the regional timber pricing co-ordinator.

    c. Where the licensee gives written notice to the regional timber pricing co-ordinator of that choice, the adjusting stumpage rate shall become a non-adjusting stumpage rate three (3) weeks after the regional timber pricing co-ordinator receives the notice.

    d. On the date that the stumpage rate becomes a non-adjusting stumpage rate, the stumpage rate for the cutting authority continues to be the stumpage rate that was in effect on that date.

    e. Where a stumpage rate is changed from an adjusting stumpage rate to a non-adjusting stumpage rate, the stumpage rate for the cutting authority shall not change for the term of the cutting authority and all extensions from the date that the stumpage rate is changed to a non-adjusting stumpage rate, except where the cutting authority area is reappraised under section 2.2.1(1)(e) or under section 2.2.2.

2. The point of appraisal that when used in the calculation of the operating cost estimate produces the least cost total development, harvesting and transportation determination of the operating cost estimate unless:

   a. five years have passed from the date that a milling facility was permanently rendered incapable of producing lumber and chips, and

   b. it was the only milling facility associated with that point of appraisal.

3. Where a point of appraisal cannot be selected under subsection (2) of this section because of the conditions of paragraphs (a) and (b) of that subsection, the point of appraisal that produces the next lowest total development, harvesting and transportation estimate must be used in the determination of the operating cost estimate in accordance with the requirements of subsection (2) of this section.

4. The process in subsection (3) of this section is continued until a point of appraisal can be selected without being excluded by the conditions of paragraphs (2)(a) and (b).

5. For the purposes of determining the least cost total harvesting, development and transportation estimate, the locations that were used in measurement of cycle time for each point of appraisal in Table 4-1 as of October 1, 2003 will be used.

6. The manufacturing costs and average market values for the selling price zone in Table 4-1 for the least cost point of appraisal selected under paragraphs 2, 3 or 4 must be used in the appraisal.

Table 4-1 Points of Appraisal

Northern Interior (Zone 5, 15, 25 & 35)			
Bear Lake	Fort St. James	Mackenzie	Smithers
Burns Lake	Fraser Lake	Prince George	Strathnaver
Clear Lake	Houston	Quesnel	Vanderhoof
Engen	Isle Pierre		

Skeena (Zone 6, 16, 25 & 36)		
Terrace	Hazelton	Kitwanga

Southern Interior (Zone 7, 17, 25 & 37)			
Adams Lake	Galloway	Merritt	Thrums
Armstrong	Grand Forks	Midway	Valemount
Canal Flats	Kamloops	Okanagan Falls	Vavenby
Canoe	Kelowna	Princeton	Westbank
Castlegar	Lavington	Radium	Ymir
Craigellachie	Lumby	Revelstoke	
Creston	McBride	Slocan	
Elko			

South Cariboo (Zone 8, 18, 25 & 38)				
100 Mile House	Chasm	Lytton	Squamish	Williams Lake

Fort Nelson - Peace (Zone 9, 19 & 25)		
Chetwynd	Fort Nelson	Fort St. John

7. The following Points of Appraisal will expire on the dates indicated: Carnaby (February 24, 2010), Boston Bar (June 30, 2009), Fort Nelson (October 31, 2010), Okanagan Falls (November 30, 2012), Kamloops (May 12, 2013).

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 on Private Land

1. 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:

   a. If development provides access to appraised timber only, the total estimated costs are included in the appraisal.

   b. If development provides access to non-appraised timber only, cost estimates are not included in any appraisal.

   c. If 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.

4.3.1.1.3 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.

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

6. 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.

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.

4.3.1.1.4 Extended Road Amortization

1. Except as provided in subsection (3), for new appraisals where the development occurring under the authority of a road permit or cutting permit 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 that are issued under the licence that entitled the licensee to apply for the road permit or cutting permit.

2. The agreement is subject to the following conditions:

    a. Future tributary timber included in the extended road amortization agreement must be either within the woodlot licence or 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.

    b. The road portion that may be included in the agreement ends at the far boundary of the first cutting authority being appraised.

    c. The agreement must indicate the cost estimate that is being distributed to each existing or future cutting authority in the agreement.

    d. The agreement must be signed by the licensee and the regional manager.

    e. The costs apportioned to each cutting authority under the agreement may be adjusted once, in conjunction with this section, at reappraisal using the same ratio for distributing the costs as in the original agreement provided harvesting has not commenced on any of the cutting authority areas included in the agreement.

    f. Previously apportioned costs are not used to exceed the $4.00/$m^3$ in subsection (1) of this section.

    g. The agreement confers no obligation on the Crown to compensate licensees for any unamortized costs.

3. The regional manager will not enter into any new extended road amortization agreements for cutting permits issued for a woodlot licence with an effective date after November 30, 2008.

For each road, the additional stabilizing material cost estimate ($/km) is determined from the equation for the appropriate road group.

Road Groups	Equation
1	Refer to section 4.3.3(5)(n)
2	8897
3	7336 + (1334 * D) + (13331 * QROCK) + (3939 * LT)
4	11913
5	9121
6	10631 + (205 * D)
7	10631 + (205 * D)
8	3153 + (370 * D)
9	4375 + (3108 * D)
10	16630
11	16630
12	16630

Where:

Road groups are defined in Table 4-3.

D = Distance in kilometres from source of ballast to the centre of the section that requires ballast (rounded to the nearest 0.1 km)

LT = 1 if a long term road, otherwise = 0

QROCK = 1 if road is stabilized with quarry rock that requires drilling and blasting. Otherwise QROCK = 0

No cost estimate for additional stabilizing material is allowed for any snow and ice roads.

4.3.2.6 Cattle Guards, Remedial Fences and Pipeline Crossings

1. Where the installation of cattle guards, remedial fences or wing fences are required to mitigate the impacts to range barriers resulting from harvesting on the cutting authority area, the following cost estimates apply:

a.	Cattle Guards	$5754 each
b.	Remedial Fences and Wing Fences	$987 per 100 m (post and wire, post and rail and/or log snake fence construction only)

2. For pipeline crossings, the following cost estimates apply:

   $3400 per single pipe crossing

   $2046 per pipe in multiple pipe crossings (where 2 or more pipes are crossed within the same right-of-way)

3. The cost estimates for subsections (1) and (2) include materials, transportation and installation.

4.3.3 Detailed Engineering Cost Estimates

1. Where the tabular cost estimating procedures of this manual cannot be used due to their physical limitations, the cost of a project shall be estimated by preparing a detailed engineering cost estimate. The regional manager may approve standardized procedures to generate cost estimates for use in projects as listed below.

2. Where specific development projects involve detailed engineering cost estimates, the district manager shall be advised of project details no later than 60 days before the start of work on the project.

3. For appraisal purposes, the estimated development project costs are made on the basis of the site-specific data using the definitions found in section 4.3.2.2 for common subgrade construction variables, the culvert costs included in Table 4-4, and the equipment and labour rates specified in Appendix I. Due consideration is given to arm's length competitive bids for any specific project. The appraisal estimate is not constrained in any way by a licensee's actual costs.

4. If the ECE is re-estimated once after construction as provided in section 2.2(3) (using more accurate on site information) the new detailed engineering cost estimate replaces the original (used in the initial appraisal). Detailed engineering cost estimates originally estimated using ministry approved competitive bids may be re-estimated once after construction provided the original call to tender included a methodology for adjusting the bid price based on more accurate site information and re-estimation of those costs is performed in accordance with that methodology. ECE's are not re-estimated due to labour and/or equipment rates being updated periodically in Appendix I.

5. Where road sections estimated as a detailed engineered cost estimate are contiguous with tabular cost estimates, costs for mobilization and demobilization will only be allowed for special equipment not required for the construction of the tabular roads. The costs for replacement or addition of stabilizing material must be determined using section 4.3.2.5 unless the material is placed in conjunction with geo fabric, geo grids, corduroy or where the stabilizing material requires processing such as screening or crushing.

b. Provincial sales tax (for materials).

c. Supervision of construction of complex structures by a professional engineer.

d. Bridge Costs

i. In addition to other costs described in this section, bridge costs may include:

- Crib back fills to a maximum distance of 15 m on either end.
- Site preparation.
- Protection features such as rip rap.
- Material and equipment supply and delivery (subject to paragraphs (ii) and (iii) in this subsection).
- Bridge certification by a professional engineer either employed by the licensee or contracted. A maximum of three field visits are permitted unless otherwise approved by the regional timber pricing co-ordinator.

ii. Where bridge materials are re-used by the original purchaser at a different site, the bridge cost estimate may include the cost of dismantling the materials at the site where they were previously used, and transportation to and installation at the different site, but may not include the initial materials and delivery costs.

iii. Where used bridge materials are purchased by the licensee from a legally non-associated party, only the cost of purchasing and transporting those materials approved by the person determining the stumpage rate may be included in the bridge cost estimate in addition to the costs listed above.

e. Site plans, designs and layouts.

f. Where equipment is not, or will not be already on site for adjoining tabular road, bridge or culvert construction, then the costs of mob and demob may be included in the engineered cost estimate.

9. GST and supervision costs other than as stated above, are not to be included in the engineered estimate.

10. Where different timber volumes are used for separate cost estimates, the unit costs are rounded to the nearest cent before totalling.

11. In some cases, the detailed engineering cost estimates may be apportioned to two or more licensees' tributary cutting authorities, as described under section 4.3.1.1.4.

4.3.3.1 Trending of Detailed Engineering Costs

1. All detailed engineering costs must be adjusted to match the cost base of the manual in effect at the time of the appraisal or reappraisal (refer to Table 4-5). This includes development costs in apportionment agreements, ministry approved competitive bid tenders, and ECE's prepared using Appendix I.

2. ECE Cost Year means:

    a. For ECEs (or portion(s) thereof) which are calculated using this manual, the ECE Cost Year is 2006.

    b. For ECEs (or portions(s) thereof) which are calculated using tenders, materials costs, design and survey costs, etc. the year the costs are based on or incurred is the ECE Cost Year.

    c. Where all components of an ECE have a common ECE Cost Year, the trend factor can be directly determined from Table 4-5.

    d. For new or re-estimated (section 2.2(3)) ECEs where components of an ECE have different ECE Cost Years, it is necessary to trend all components to the Cost Base Year of the manual in effect at the time (based on the effective date of the cutting authority). The Cost Base Year then becomes the ECE Cost Year for future trending.

5.6 Calculation of Stumpage Rate

5.6.1 Calculation of Indicated Stumpage Rate

The indicated stumpage rate for a cutting authority is defined as:

$$ISR = IBR + (VI - IMVI)$$

Where:

ISR	=	Indicated Stumpage Rate
IBR	=	Interior Base Rate as defined in Section 5.5
VI	=	Value Index for the cutting authority as defined in Section 5.2
IMVI	=	Interior Mean Value Index, as defined in Section 5.3

5.6.2 Prescribed Minimum Stumpage Rate

The minimum stumpage rate is prescribed by the *Minimum Stumpage Rate Regulation* (B.C. Reg. 354/87). The current minimum stumpage rate is $0.25 per cubic metre.

5.6.3 Reserve Stumpage Rate

For each cutting authority area, except those containing timber licence volume, the reserve stumpage rate is determined by selecting the greater of:

- the indicated stumpage rate, or
- the prescribed minimum stumpage rate.

5.6.4 Levies

1. A silviculture levy may be added to:

   a. the reserve stumpage rate determined under section 5.6.3,

   b. the stumpage rate determined under subsections 6.1.3, 6.2(1), 6.2(2) or section 6.5,

   c. the reserve stumpage rate indicated in Table 6-4 for all species grades 4 and 6 and deciduous sawlogs.

2. The levy is equal to the district manager's cost estimate of silviculture costs to be incurred by the Crown.

3. 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.

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

5.6.5 Upset Stumpage Rate

The upset stumpage rate is the total of the reserve stumpage rate plus any development, silviculture and administration levies which may be charged as defined in section 5.6.4.

5.6.6 Total Stumpage Rate

1. Except as provided in subsection (2) of this section the total stumpage rate is the upset stumpage rate plus any bonus bid.

2. If the upset stumpage rate is determined under section 7.5.1(7), the total stumpage rate is equal to the MPS upset stumpage rate determined under that section.

Miscellaneous Policies 6

6.1 Average Stumpage Rates by Forest Zone and Species

1. a. Each of the following forest zones referred to in Tables 6-1, 6-1a, 6-2 and 6-3 is made up of the corresponding forest district areas:

   i. North Central Zone - Fort St. James, Mackenzie, Nadina, Prince George, Quesnel and Vanderhoof Forest Districts.

   ii. North East Zone - Fort Nelson and Peace Forest Districts.

   iii. North West Zone - Kalum and Skeena Stikine Forest Districts.

   iv. South East Zone - Arrow Boundary, Columbia, Headwaters, Kamloops, Kootenay Lake, Okanagan Shuswap and Rocky Mountain Forest Districts.

   v. South West Zone - 100 Mile House, Cascades, Central Cariboo and Chilcotin Forest Districts.

   b. Where a species of coniferous timber is not listed in Table 6-1, 6-1a, 6-2 and 6-3, the rate that shall be used for that species of timber is the rate listed in the column headed as OTHER.

Table 6-1 Coniferous Average Sawlog Stumpage Rates in $/m^3 by Forest Zone and Species

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	Y. PINE	OTHER′
North Central	6.39	-	5.70	-	-	5.96	7.38	-	6.52
North East	1.89	-	-	-	-	4.93	6.77	-	5.52
North West	2.06	2.93	-	2.01	-	13.28	10.54	-	5.12
South East	10.71	9.37	7.41	8.50	8.54	9.81	11.00	4.43	9.57
South West	10.79	18.09	9.75	10.03	10.61	8.02	9.62	-	8.65

′ Average for the Forest Zone

6.1.1 Community Forest Agreements

1. The sawlog stumpage rate for each species of coniferous timber harvested under any cutting authority issued under a Community Forest Agreement is the rate prescribed in Table 6-1a for the forest zone in which the cutting authority area is located.

2. Sections 1.4(d), sections 6.1.2 through 6.5 and section 6.7 of this chapter do not apply to Community Forest Agreement cutting authorities.

3. The stumpage rate determined under this section is redetermined on August 1 of each year in accordance with this section.

4. Notwithstanding any other subsection of this section the stumpage rate determined under this section must not be less than the prescribed minimum stumpage rate.

6.1.2 Woodlot Licences

1. Except as provided in subsection (2) of this section, the sawlog stumpage rate for each species of coniferous timber harvested under a cutting permit issued for a woodlot licence with an effective date after November 30, 2008 is the rate prescribed in Table 6-1a for the forest zone in which the cutting authority area is located.

2. Where a woodlot licence cutting permit has been issued with an effective date after November 30, 2008 for the purpose of using amounts from an eligible extended road amortization agreement in an appraisal, then the stumpage rate will be determined using the procedures in this manual excluding this section.

3. Except as provided in subsection (4) of this section, the sawlog stumpage rate for coniferous timber harvested under a road permit issued for a woodlot licence with an effective date after November 30, 2008 is the rate prescribed in Table 6-1a for the forest zone in which the timber mark applies.

4. Where a woodlot has an eligible extended road amortization agreement before December 1, 2008 the sawlog stumpage rate for a road permit with an effective date on or after December 1, 2008 is calculated using the procedures in section 6.3.

5. The sawlog stumpage rate for each species of coniferous timber harvested under a blanket salvage permit issued for a woodlot licence is the rate prescribed in Table 6-1a for the forest zone in which the blanket salvage permit applies.

6. The stumpage rate determined under subsections (1), (3) and (5) of this section is redetermined on August 1, each year in accordance with this section.

7. Except as provided in subsections (2) and (4) of this section, sections 1.4(d), 6.1.1, 6.1.3 through 6.5 and 6.7 do not apply to woodlot licences.

8. Notwithstanding any other subsections of this section the stumpage rate determined under this section must not be less than the prescribed minimum stumpage rate.

Table 6-1a Community Forest Agreements and Woodlot Licences: Coniferous Average Sawlog Stumpage Rates in $/m^3

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	Y. PINE	OTHER′
North Central	0.96	-	0.86	-	-	0.89	1.11	-	0.98
North East	0.28	-	-	-	-	0.74	1.02	-	0.83
North West	0.31	0.44	-	0.30	-	1.99	1.58	-	0.77
South East	1.61	1.41	1.11	1.28	1.28	1.47	1.65	0.66	1.44
South West	1.62	2.71	1.46	1.50	1.59	1.20	1.44	-	1.30

′ Average for the Forest Zone

6.1.3 Incidental Conifer in Deciduous Leading Stands

1. Except as provided in section 7.5.1(5), this section applies to coniferous timber in a cutting authority area where the total volume of all deciduous species to be harvested is greater than 70 percent of the total net cruise volume to be harvested.

2. a. The stumpage rate for each species of coniferous timber must be determined by using the stumpage rate prescribed in Table 6-1 for the forest zone in which the cutting authority area is located.

   b. Where the Crown is responsible for basic silviculture on the cutting authority area, the stumpage rate for each species of coniferous timber shall be the sum of the rate determined under paragraph (a) of this subsection and the silviculture levy determined under section 5.6.4.

3. A stumpage rate determined under subsection 2 shall be redetermined on June 1, of each year in accordance with this section.

6.4 Salvage Timber Stumpage Rates

1. This section applies to cutting authorities issued under licences which do not have an allowable annual cut. Salvaged timber is either post harvest material or damaged timber:

2. Post Harvest Material is either:

    a. wooden culverts and bridges, or

    b. post logging residue.

3. Damaged Timber is timber that:

    a. Has been blown down,

    b. Has been damaged by fire, disease, snow press, or

    c. Will die within one year, as determined by the district manager, as a result of the affects of the mountain pine beetle, or other forest pests.

4. The criteria and methodology for the calculation of salvaged timber stumpage rates are:

    a. Post harvest material may not be combined in the same cutting authority area with damaged timber.

    b. Except where damage to adjacent or contiguous timber occurs after harvesting is completed on the adjacent primary logging cutting permit area and the harvesting equipment has been demobilized from the area, damaged timber salvage cutting authority areas must be scattered, and not be adjacent to or contiguous with an existing cutting authority area.

    c. Except as provided in subsection (4)(d) of this section the total area of a clearcut salvage harvesting area shall not exceed 5 hectares.

    d. Where salvage of only damaged stems through partial cutting will leave a stand that meets minimum stocking standards, the area harvested may be larger than 5 hectares.

    e. Salvage logging stumpage rates may only be determined for a cutting authority where more than one-third of the volume of coniferous timber to be harvested in the cutting authority area is damaged timber.

    f. Post harvest salvage may only occur after primary logging has been satisfactorily completed and residue and waste assessments have been submitted to and accepted by the Ministry.

g. Salvage cannot occur on a road right-of-way which has an active timber mark associated with it.

h. Except as provided in section 2.2.2, a stumpage rate determined under this section is fixed for the term of the cutting authority and all extensions.

5. Where salvaged timber is damaged timber, the sawlog stumpage rate for each species of coniferous timber shall be the rate in Table 6-2 for the Forest Zone in which the cutting authority area is located.

6. Where the salvaged timber is post harvest material, the sawlog stumpage rate for each species of coniferous timber shall be the rate in Table 6-3 for the forest zone in which the cutting authority area is located.

Table 6-2 Coniferous Average Sawlog Stumpage Rates for Salvage of Damaged Timber by Forest Zone and Species in $/m^3

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	Y. PINE	OTHER′
North Central	3.83	-	5.13	-	-	4.47	6.64	-	3.91
North East	1.13	-	-	-	-	3.70	6.09	-	3.31
North West	1.24	2.64	-	1.21	-	9.96	9.49	-	3.07
South East	6.43	8.43	6.67	5.10	7.69	7.36	9.90	3.32	5.74
South West	6.47	16.28	8.78	6.02	9.55	6.02	8.66	-	5.19

′ Average for the Forest Zone

Table 6-3 Coniferous Average Sawlog Stumpage Rates for Salvage of Post Harvest Material by Forest Zone and Species in $/m^3

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	Y. PINE	OTHER′
North Central	1.60	-	2.85	-	-	2.98	3.69	-	1.63
North East	0.47	-	-	-	-	2.47	3.39	-	1.38
North West	0.52	2.34	-	0.50	-	6.64	5.27	-	1.28
South East	2.68	7.50	3.71	2.13	4.27	4.91	5.50	2.22	2.39
South West	2.70	14.47	4.88	2.51	5.31	4.01	4.81	-	2.16

′ Average for the Forest Zone

6.6 Miscellaneous Stumpage Rates

1. Unless otherwise specified in this manual, the stumpage rates, at the time of scale for timber harvested for the purposes described, in the districts listed, in the forest district specific section of Table 6-4 are as prescribed in that table.

Table 6-4 Miscellaneous Stumpage Rates

All Interior Forest Regions

Species	Code [1]	Product	Reserve Stumpage Rate
All Species	SB	Shake & Shingle Bolts, Blocks and Blanks.	$5.30/m^3
All Species	SK	Shakes	$6.00/m^3
Cedar	PR	Posts & Rails (Split and Round)	$3.00/m^3
All other Species	PR	Posts & Rails (Split and Round)	$1.20/m^3
All Species	MT	Mining Timbers	$3.00/m^3
All Species	FW	Firewood	$0.50/m^3
Yew		All	$0.25/m^3
All Species	CH	Wood chips from post-harvest material where a waste assessment has been made and the material will be chipped at the roadside or the landing	$0.25/m^3
All Species	HF	Hogged tree material from post-harvest material where a waste assessment has been made and the material will be hogged at the roadside or the landing.	$0.25/m^3
All Species		Grades 4 and 6, except where the upset stumpage rate is determined under section 6.2.1(1)(a) and (b) and 7.5.1(7)	$0.25/m^3
Deciduous Species		All, except grades 4 and 6 and except where the upset stumpage rate is calculated under section 6.2.1(1)(a) and (b) and 7.5.1(5) and (7)	$0.50/m^3
All Species	SS	Stakes & Sticks.	$1.20/m^3
All Species	XM	Christmas Tree: under 3m 3-5 m over 5 m	$0.20/each $1.00/each $1.50/each
All Species		Logs salvaged below the high water levels of Reservoir Lakes and the Slocan, Kootenay, Mineral, Babine and Ootsa Lakes	$0.25/m^3
All Species		Marine Beachcomb	$0.70/m^3
All Species		Trees classified as "Dead Potential" on Cruise-based cutting authorities, except where the upset stumpage rate is calculated under section 6.2.1 and 7.5.1(7)	$0.25/m^3
All Coniferous		For logs harvested from the following Research Forests: Alex Fraser (UBC), Aleza Lake (UBC and UNBC), College of New Caledonia (CNC), and Fort St. James (UNBC)	$0.25/m^3
All Species		Firmwood Reject	NIL

[1] Special Forest Product as identified in section 94(3) of the *Act* and described in the *Scaling Manual*.

Forest District Specific

Description of Activity	Forest District	Reserve Stumpage Rate
New Crown land area disturbed for mining exploration trails, seismic lines[1], gas or oil well sites and right-of-way to well sites. [2]	Rocky Mountain Peace Ft. Nelson Mackenzie	$2,015/ha $1,030/ha $729/ha $1,244/ha

[1] The corresponding district reserve stumpage rate from the above table is adjusted according to the category of line clearing as follows:

Category 1 - no adjustment
Category 2 - 1/2 of the reserve stumpage rate
Category 3 - 1/3 of the reserve stumpage rate

The gross area for each category reported as new line on either; the Oil and Gas Commission's Geophysical Final Plan cover sheet or an As Cleared Plan is multiplied by the reserve stumpage rate as adjusted above (refer to Appendix V for category definitions).

[2] For pipe line rights-of-way a stumpage rate must be determined by using the above rates for cutting authorities containing 2 000 m^3 or less, of merchantable coniferous volume. For pipe line rights-of-way cutting authorities greater than 2 000 m^3 see section 6.7.

6.6.1 Miscellaneous Stumpage Rates for Timber Licences

Timber licence cutting authority areas that have not been appraised and have a cutting authority term that began before May 1, 1995, must be appraised effective April 1, 2003.

6.7 Linear Tenures

1. For this section:

   "Linear tenures" means a licence to cut issued for:

   - A right-of-way to a mine site, or
   - A mining exploration trail in a district other than Fort Nelson, Peace, Mackenzie, Rocky Mountain, or
   - A pipeline right-of-way where the volume of timber on the cutting authority area is greater than 2 000 cubic metres, or
   - A pipeline right-of-way where the volume is 2 000 m3 or less in a district other than Fort Nelson, Peace, Mackenzie, or Rocky Mountain, or
   - A hydro transmission line, or
   - A highway right-of-way for a road administered by the *Ministry of Transportation*, or
   - A forestry licence to cut issued under section 47.6(3) of the *Act* in conjunction with a BCTS road development contract, or
   - A fence line or protection of a fence line administered by the ministry under the *Range Act*.

   "Licensee" means the licensee who has been issued a linear tenure.

   "Weighted average sawlog stumpage rate" means the weighted average sawlog stumpage rate determined in accordance with section 6.3(4).

2. The stumpage rate for a linear tenure shall be:

   a. The weighted average sawlog stumpage rate for all cutting authorities in the smaller of the same forest district, timber supply area or region in which the entire cutting authority area for the linear tenure is located, or

   b. If a weighted average sawlog stumpage rate is not available for the area in paragraph (a) above, then the weighted average sawlog stumpage rate for the next largest area.

3. The costs of roads constructed on the cutting authority area for a linear tenure are only eligible for inclusion as part of the development cost estimate in the licensee's first fully appraised tributary cutting authority area if those cost were not used in a full appraisal under paragraph (4) of this section.

4. Notwithstanding any other paragraph in this section the stumpage rate for a linear tenure may be determined through a full appraisal using the best information available to the person who determines the stumpage rate.

5. A stumpage rate determined under this section shall be fixed for the term of the linear tenure and all extensions.

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7.4 Market Price Calculation

The market price must be calculated in accordance with this section

7.4.1 Market Price Variables

The calculation of each market price variable must include the total net deciduous volume unless otherwise indicated in the description of that variable below.

MP	=	Market Price for the cutting authority in ($/m^3).
RSP	=	Real Stand Selling Price for coniferous species ($/m^3). See section 7.3.
PC	=	Fraction of harvest method volume that is appraised as partial cut. PC = (100 – CAPCUT %)/100. See section 4.9 for definition of CAPCUT %. The 80% limit in section 4.9 does not apply.
FIR	=	Fraction of total net coniferous volume that is Douglas fir.
VOL	=	Total net coniferous volume (m^3).
CY	=	Fraction of total harvest method volume that is appraised as overhead cable yarding.
HP	=	Fraction of total harvest method volume that is appraised as helicopter yarding.
HORSE	=	Fraction of total harvest method volume that is appraised as horse yarding.
FIRE	=	Fraction of total net coniferous volume that is fire damaged.
CYCLE	=	Hauling round trip cycle time (Primary CT (hrs) + Secondary CT (hrs)). See section 4.5.1.
HB	=	Fraction of total net coniferous volume that is hemlock and balsam.
CEDAR	=	Fraction of total net coniferous volume that is cedar.
VPT	=	Cutting permit average volume per tree from cruise (m^3).
DECID	=	Total net deciduous volume (m^3) / (total net deciduous volume (m^3) + total net coniferous volume (m^3)).
SLOPE	=	Cutting permit average slope from cruise (%).

DANB	=	Average number of bidders by district from the auction dataset (see Table 7-2).
DECAY	=	Prorated coniferous species decay (%) from cruise/100.
Z9	=	Fort Nelson - Peace selling price zone variable. Z9 = 1 if cutting authority is appraised with selling price zone 9, otherwise Z9 = 0.
AUC2008	=	2008 Auctions variable. AUC2008 = 1.
DECK	=	DECK_VOL / VOL
DECK_VOL	=	The total net coniferous volume that has been felled and decked in the timber sale (m^3).
HWY	=	1 if primary haul method is Highway, otherwise HWY = 0.
GO	=	Fraction of the total net coniferous volume that is Lodgepole pine green attack plus the fraction of total net coniferous volume that is other insect attack.
RG	=	Fraction of the total net coniferous volume that is Lodgepole pine red attack plus the fraction of the total net coniferous volume that is Lodgepole pine grey attack.
ER	=	Exchange Rate ($US/$C). Bank of Canada three-month average rate beginning five months prior to the stumpage rate effective date, as published by Revenue Branch.
CD	=	Competitive Deciduous Equals 1 if the upset stumpage rate is determined under section 7.5.1(5), otherwise CD = 0.
CPI	=	Monthly B.C. Consumer Price Index (CANSIM 326-0020, 2002 = 100) x 1.1787.
CPIF	=	Consumer Price Index Factor calculated as CPI/109.3.

4. Camp Costs (refer to section 4.8.2)

   Cost estimate is $\$2.58/m^3$.

5. Skyline Yarding

   Cost estimate is $\$6.32/m^3$ for the volume appraised as skyline.

6. High Development Cost

   Where the development cost estimate (DC) determined under chapter 4, is greater than $\$3.04/m^3$ the high development cost specified operations estimate (HDC) is calculated as follows:

   HDC $\$/m^3$ = DC – 1.20

   If DC < = 3.04 HDC = 0

7.5 MPS Stumpage Rate

7.5.1 MPS Upset Stumpage Rate

1. Except as provided in subsections (2), (3), (4)(a)(b), (5), (6) and (7), the MPS upset stumpage rate for a timber sale licence advertised on or after December 2, 2005, shall be determined in accordance with section 7.5.2.

2. Where applications for a timber sale licence with an MPS upset stumpage rate determined in accordance with section 7.5.1(1) have been invited but no applications have been received, the MPS upset stumpage rate shall be the rate approved by the Executive Director, Field Operations.

3. Where the Executive Director, Field Operations does not anticipate that applications for a timber sale licence will be received due to market conditions or timber profile the MPS upset stumpage rate shall be the rate approved by the Executive Director, Field Operations.

4. a. The MPS upset stumpage rate for decked timber or partially harvested timber that is over three years old and is administered by BCTS, shall be the prescribed minimum stumpage rate when that is requested by the Timber Sales Manager.

   b. The MPS upset stumpage rate for decked timber or partially harvested timber that has been decked or felled for three years or less and is administered by BCTS shall be the rate requested by the Timber Sales Manager.

5. a. Except as provided in paragraph (b) of this subsection, the MPS upset stumpage rate for a timber sale licence where the volume of deciduous timber to be harvested on the cutting authority area is equal to or greater than sixty percent of the total net cruise volume, shall be determined in accordance with section 7.5.2 except that the market price determined under section 7.4.2 shall use CD = 1.

   b. Where an MPS upset stumpage rate for a timber sale licence has been calculated under paragraph (a) of this subsection and

      i. Applications for the licence have been invited but no applications have been received, or

      ii. The Executive Director, Field Operations does not anticipate that application for the licence will be received due to market conditions or timber profile,

   then the MPS upset stumpage rate shall be the rate approved by the Executive Director, Field Operations.

6. The MPS upset stumpage rate determined under subsections (2), (3), (4)(b), (5)(a)(b) and (7) of this section shall not be less than the variable cost to prepare the timber for sale calculated by the Timber Sales Manager.

7. Where the invitation to tender for timber authorized for harvest under a timber sale licence requires a bonus offer and the amount of stumpage payable will be based on a cruise of the timber as authorized under section 106 of the *Act*, the MPS upset stumpage value shall be the value approved by the Executive Director, Field Operations.

8. Not withstanding any other paragraph in this section the MPS upset stumpage rate must not be lower than the prescribed minimum stumpage rate.

7.5.2 Upset Stumpage Rate Calculation

The upset stumpage rate (USR) is calculated as follows:

USR = (MP – SO) x (1-DF)

Where:

USR	=	Upset stumpage rate
MP	=	Market Price as defined in section 7.4.2
SO	=	Specified operations as defined in section 7.4.3.
DF	=	0.00 if the cutting authority being appraised was entered into under section 47.6(3) of the *Forest Act*, otherwise DF = 0.30

7.5.3 Total MPS Stumpage Rate

1. Except as provided in subsections (2), (3) and (4) of this section, the total MPS stumpage rate is the sum of the MPS upset stumpage rate and the bonus bid.

2. Where the MPS upset stumpage rate is determined under subsections (2), (3), and (4) of section 7.5.1, or section 7.5.2, the total MPS stumpage rate applies to Grade Code 1 and 2 coniferous sawlogs.

3. Where the MPS upset stumpage rate is determined under section 7.5.1(5), the total MPS stumpage rate applies to Grade Code 1 and 2 coniferous and deciduous sawlogs.

4. Where the MPS upset stumpage rate is determined under section 7.5.1(7), the total MPS stumpage rate applies to the timber species and volumes specified by the Executive Director, Field Operations.

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