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To: Interior Executive Directors

From: The Honourable Steve Thomson, Minister of Forests, Lands and Natural Resource Operations

Re: Amendment No. 4 to the *Interior Appraisal Manual (IAM)*

I hereby approve Amendment No. 4 to the *IAM*. The following sections have been amended:

Section 4.3.2.6 A new cost estimate is provided for logging debris fences.

Chapter 6 The coniferous average sawlog stumpage rates have been updated in Tables 6-1, 6-2, 6-3, 6-4, and 6-5.

This amendment will come into force on May 1, 2014. Copies of the amendment and the amended *IAM* are available at the following link:

<http://www.for.gov.bc.ca/hva/manuals/interior.htm>

Further amendments or revisions to this manual require my approval.

A handwritten signature in black ink that reads "Steve Thomson".

Steve Thomson
Minister

pc: Susanna Laaksonen-Craig, Executive Director, Timber Operations, Pricing and First Nations Division
Murray Stech, Director, Timber Pricing Branch
Grant Loeb, Manager Timber Pricing, Timber Pricing Branch
Len Marsh, Forest Revenue Manager, Thompson Okanagan Region
Anthony Giannotti, Revenue Team Leader, Omineca Region



**MANUAL REVISION
TRANSMITTAL**

<p>FOR FURTHER INFORMATION OR IF YOU HAVE A CHANGE OF ADDRESS, PLEASE CONTACT:</p> <p>Bob Bull Senior Timber Pricing Forester (Interior) Timber Pricing Branch Ministry of Forests, Lands and Natural Resource Operations 1st Floor, 1520 Blanshard Street Victoria, BC V8W 3K1</p> <p>Phone: 250 – 356 – 7709 Email: Bob.Bull@gov.bc.ca FAX: 250 – 387 – 8393</p>	MANUAL TITLE	
	<i>Interior Appraisal Manual</i>	
	AMENDMENT Amendment No. 4	ISSUE DATE May 1, 2014
	MANUAL CO-ORDINATOR Ashley Sasaki Publication/Administrative Co-ordinator	
AUTHORIZATION Murray Stech Director, Timber Pricing 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 Insert	Chapter 4	17-18	After Chapter 4 Tab
Remove Insert	Chapter 6	1-4 9-12 17-18	After Chapter 6 Tab
Insert	Memorandum from Minister and Transmittal Sheet		After Amendments Tab

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(7)(n)
2	20465
3	$13216 + (18754 * Q)$
4	6859
5	$10304 + (640 * D)$
6	14715
7	10066
8	7285
9	7285
10	$6437 + (3187 * D)$
11	$6437 + (3187 * D)$
12	$6437 + (3187 * D)$

Where:

Road groups are defined in Table 4-1.

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

Q = 1 if quarried or ripped rock, otherwise Q = 0

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

4.3.2.6 Cattle Guards, Fencing and Pipeline Crossings

1. Where the installation of cattle guards **or fencing** are required to mitigate the impacts resulting from harvesting on the cutting authority area, the following cost estimates apply:

- a. Cattle Guards \$5788 each
- b. Remedial Fences and Wing Fences \$888 per 100 m (post and wire, post and rail and/or log snake fence construction only), **used to mitigate the removal of natural range barriers**
- c. **Logging Debris Fences** \$250 per 100 m (logging debris used to protect sensitive riparian areas within a cut block)

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

\$3819 per single pipe crossing

\$2298 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 (ECE)

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, unless otherwise agreed to between the district manager and the licensee.
3. For appraisal purposes, estimated development project costs for ECE's 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 4-2, and the equipment and labour rates specified in Appendix I from the manual in effect at the time the costs were incurred. Due consideration is given to arm's length competitive bids for any specific project. The Crown is not liable for any difference between the appraisal estimate and the licensee's actual costs.
4. If the ECE is re-estimated once after construction as provided in section 2.2(4) (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 the actual on-site information is known prior to the appraisal that information shall be used in the ECE as determined by the person who determines the stumpage rate.

Miscellaneous Policies

6

6.1 Coniferous Average Sawlog Stumpage Rates by Forest Zone and Species

1. a. Each of the following forest zones referred to in Tables 6-1, 6-2, 6-4 and 6-5 is made up of the following forest districts:
 - 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, 6-2, 6-4 and 6-5, 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 \$/m³ by Forest Zone and Species

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	W. PINE	Y. PINE	OTHER ¹
North Central	16.93	-	18.39	11.55	-	14.22	19.21	-	-	17.80
North East	8.90	-	-	-	5.57	7.29	7.25	-	-	7.29
North West	5.82	4.51	-	4.91	-	9.39	6.15	-	-	6.39
South East	13.89	18.53	16.02	15.55	16.04	15.58	14.65	13.94	9.47	15.56
South West	15.24	21.67	17.81	12.75	-	18.29	16.62	13.51	-	17.23

¹ 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 6-2 for the forest zone in which the cutting authority area is located.
2. Section 1.4(1)(d), sections 6.1.2 through 6.5 and sections 6.7 through 6.9 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.

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 6-2 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 is the rate prescribed in Table 6-2 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 6-2 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(1)(d), 6.1.1, 6.1.3 through 6.5, and sections 6.7 through 6.9 do not apply to Woodlot Licence cutting authorities.

**Table 6-2 Community Forest Agreements and Woodlot Licences:
Coniferous Average Sawlog Stumpage Rates in \$/m³**

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	W. PINE	Y. PINE	OTHER ¹
North Central	2.54	-	2.76	1.73	-	2.13	-	-	-	2.67
North East	1.34	-	-	-	0.84	1.09	-	-	-	1.09
North West	0.87	0.68	-	0.74	-	1.41	-	-	-	0.96
South East	2.08	2.78	2.40	2.33	2.41	2.34	2.20	2.09	1.42	2.33
South West	2.29	3.25	2.67	1.91	-	2.74	-	2.03	-	2.58

¹ Average for the Forest Zone

6.1.3 Incidental Conifer in Deciduous Leading Stands

1. Except as provided in section 5.1.1(5), this section applies to coniferous timber in a cutting authority area where the total estimated volume of all deciduous species to be harvested is greater than 70% of the total estimated volume of all species 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 5.3.
3. A stumpage rate determined under subsection 2 shall be redetermined on June 1, of each year in accordance with this section.
4. Notwithstanding subsection (2) in this section, the stumpage rate may be determined through a full appraisal in accordance with chapters 1, 2, 3, 4, and 5.

Table 6-3 Coniferous Average Sawlog Stumpage Rates by Smallest Geographic Unit

TSA is Smallest Geographic Unit			
District	Rate (\$/m³)	TSA	Rate (\$/m³)
Arrow Boundary	15.59	Arrow	15.85
		Boundary	15.40
		Cascadia Blks 1, 2, 3	15.85
Cascades	17.58	Lillooet	6.22
		Merritt	19.40
Columbia	12.46	Cascadia Bk 4	9.07
		Golden	15.05
		Revelstoke	9.07
Headwaters	13.38	Robson Valley	12.06
Kalum	3.69	Cascadia Blks 9, 10, 11	3.40
		Kalum	3.40
		Nass	6.58
		Pacific Blks 28A, 28B	3.40
Nadina	13.24	Lakes	13.55
		Morice	13.24
Peace	7.29	Dawson Creek	8.47
		Fort St John	6.75
Quesnel	17.88	Cascadia Bks 5,6,7,8	17.88
		Quesnel	17.88
Rocky Mountain	13.17	Cranbrook	14.91
		Invermere	11.63
Skeena Stikine	7.82	Bulkley	13.22
		Cassiar	0.88
		Kispiox	8.55

District is Smallest Unit			
TSA	Rate (\$/m³)	District	Rate (\$/m³)
Kamloops	15.29	Headwaters	13.38
		Kamloops	16.84
Prince George	21.19	Fort St. James	16.70
		Prince George	22.62
		Vanderhoof	11.41
Williams Lake	21.03	Central Cariboo	23.62
		Chilcotin	1.39

District & TSA are the same		
District	TSA	Rate (\$/m³)
Fort Nelson	Fort Nelson	13.73*
Kootenay Lake	Kootenay Lake	14.66
Mackenzie	Mackenzie	12.69
Okanagan Shuswap	Okanagan	18.76
100 Mile House	100 Mile House	8.63

* Regional rate

Regions	
Region	Rate (\$/m ³)
RNI	13.73
RSI	15.94

4. If there are no records from which the weighted average sawlog stumpage rate may be determined under paragraphs (a) or (b) of subsection (2) of this section, then the stumpage rate, for each species of coniferous timber, is the rate in Table 6-1 for the forest zone in which the road or blanket salvage permit cutting authority area is located.
5. a. The total stumpage rate (\$/m³) for a road permit granted to the holder of a scale based timber sale licence entered into under section 20 of the *Act* shall be the same as the total stumpage rate (\$/m³) for the timber sale licence which entitled the holder to apply for the road permit.
 - b. The total stumpage rate (\$/ha) for a road permit granted to the holder of cruise based timber sale licence entered into under section 20 of the *Act* shall be the same as the total stumpage rate (\$/ha) of the timber sale licence which entitled the holder to apply for the road permit.
6. The stumpage rate for a road permit for a licence other than a BCTS licence shall be redetermined on June 1 of each year in accordance with the procedure in this section.
7. The costs of roads authorized for construction under road permits are eligible for inclusion as development cost estimates under section 4.3 in the appraisal of the licensees' first fully appraised tributary cutting authority. These roads will not be considered as existing roads under section 4.3.1.3(1).
8. 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 this section.
9. The stumpage rate for a blanket salvage cutting permit shall be redetermined on June 1 each year in accordance with the procedures in this section.
10. Except as provided in 6.3(5), all new Road and Blanket Salvage Permits must be scale based for billing.

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.
 - d. Will be or has been used for trap trees and associated overflow trees.
4. Except as provided in section 6.2.1(1)(c)(ii), 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 total estimated 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 6-4 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 6-5 for the forest zone in which the cutting authority area is located.

Table 6-4 Coniferous Average Sawlog Stumpage Rates for Salvage of Damaged Timber by Forest Zone and Species in \$/m³

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	W. PINE	Y. PINE	OTHER ¹
North Central	10.16	-	16.55	6.93	-	10.67	17.29	-	-	13.35
North East	5.34	-	-	-	5.01	5.47	6.53	-	-	5.47
North West	3.49	4.06	-	2.95	-	7.04	5.54	-	-	4.79
South East	8.33	16.68	14.42	9.33	14.44	11.69	13.19	10.46	7.10	11.67
South West	9.14	19.50	16.03	7.65	-	13.72	14.96	10.13	-	12.92

¹ Average for the Forest Zone

Table 6-5 Coniferous Average Sawlog Stumpage Rates for Salvage of Post Harvest Material by Forest Zone and Species in \$/m³

FOREST ZONE	BALSAM	CEDAR	FIR	HEMLOCK	LARCH	L. PINE	SPRUCE	W. PINE	Y. PINE	OTHER ¹
North Central	4.23	-	9.20	2.89	-	7.11	9.61	-	-	4.45
North East	2.23	-	-	-	2.79	3.65	3.63	-	-	1.82
North West	1.46	3.61	-	1.23		4.70	3.08	-	-	1.60
South East	3.47	14.82	8.01	3.89	8.02	7.79	7.33	6.97	4.74	3.89
South West	3.81	17.34	8.91	3.19	-	9.15	8.31	6.76	-	4.31

¹ Average for the Forest Zone

6.7 Specific Licences to Cut

1. This section applies to:
 - a. Master licences to cut,
 - b. Occupant licences to cut, and
 - c. Forestry licences to cut :
 - i. Issued under section 47.6(3) of the *Act* in conjunction with an activity funded out of the BCTS account,
 - ii. Issued in conjunction with a works contract other than BCTS, or
 - iii. Issued for a fence line or protection of a fence line administered under the *Range Act*.
2. This section does not apply to:
 - a. Cutting authorities issued for any of the activities listed in Table 6-6 that have an area reserve stumpage rate in the following districts: Fort Nelson, Peace, Mackenzie, or Rocky Mountain; or Cassiar TSA, or
 - b. The proposed Site C reservoir and dam site, or
 - c. Projects where cruising of the timber to be harvested on any tenure listed in subsection (1) has been initiated for use in a full appraisal prior to November 1, 2013.
3. Unless otherwise directed under section 2.2.2, the stumpage rate for any tenure listed in subsection (1) issued on or after November 1, 2013, shall be the stumpage rate prescribed in Table 6-3 for the smaller of the area of the forest district, timber supply area or region in which the entire cutting authority area for the tenure is located, plus the average basic silviculture cost from all species from the current quarterly stumpage appraisal parameters in the applicable region for the forest region in which the cutting authority area is located at the time the stumpage rate is determined.
4. Where the licensee will have a silvicultural obligation imposed by the Ministry then the basic silviculture cost is not added under subsection (3) of this section.
5. Where the timber felled on the cutting authority area of any tenure listed in subsection (1) will not be removed from the site the volume used for billing may be estimated using a method approved by the Minister.
6. Except as provided under paragraph (7) of this section, the stumpage rate determined under this section will be re-determined annually on June 1st.
7. The stumpage rate determined under this section for a forestry licence to cut issued under section 47.6(3) of the *Act* is fixed for the term and all extensions.

6.8 Controlled Recreation Areas (CRAs)

1. The sawlog stumpage rate for coniferous timber harvested under any cutting authority issued for a cutting authority area within a CRA is the stumpage rate approved by the director for each quarter.
2. The stumpage rate determined under subsection (1) is redetermined on the anniversary date of the cutting authority in accordance with this section.
3. Notwithstanding any other subsection in this section, the stumpage rate may be determined through a full appraisal in accordance with chapters 1, 2, 3, 4 and 5.