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To: Larry Peitsche, A/Regional Executive Director, Southern Interior Region

Bill Warner, Regional Executive Director, Northern Interior Region

From: The Honourable Pat Bell
Minister of Forests and Range Minister Responsible for the Integrated Land
Management Bureau

Re: Amendment No. 8 to the *Interior Appraisal Manual*

I hereby approve Amendment No. 8 to the *Interior Appraisal Manual* and attach a copy for your use. The following sections have been amended:

Section 6.4(5) Redundant text has been removed and remaining text reorganised for clarity.

Section 6.6 Table 6-4 a redundant section reference has been removed.

Section 7.3.2 LRF update add-ons have been updated in table 7-1.

Section 7.4.1 Three minor edits to the MPS equation variable descriptions. Table 7-2
District Average Number of Bidders has been updated.

Section 7.4.2 The coefficients for the market pricing equation have been updated.

Section 7.4.3 The cost estimates for the specified operations have been updated.

Section 7.5.1 Section references have been updated, redundant text removed. The reference to low quality timber has been removed with respect to cruise based timber sales.



Section 7.5.3 Section references have been updated.

This amendment will come into force on July 1, 2009. Further amendments or revisions to this manual require my approval.

A handwritten signature in black ink, appearing to read "Pat Bell". The signature is fluid and cursive, with the first name "Pat" and last name "Bell" clearly distinguishable.

Pat Bell
Minister

Attachment

pc: Murray Stech, Director, Revenue Branch



Ministry of
Forests
and Range



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) 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</p>	MANUAL TITLE	
	Interior Appraisal Manual	
	AMENDMENT	ISSUE DATE
	Amendment No. 8	July 1, 2009
MANUAL CO-ORDINATOR		
Judy Laton Publications/Administrative 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	iii - iv	After Table of Contents Tab
Insert		iii - iv	
Remove	Chapter 6	13 - 14 17 - 18	After Chapter 6 Tab
Insert		13 - 14 17 - 18	
Remove	Chapter 7	5 - 14	After Chapter 7 Tab
Insert		5 - 14	
Remove	Index	3 - 4	After Index Tab
Insert		3 - 4	
INSERT	Letter from Minister and Transmittal Sheet		After Amendments Tab

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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,
- a. 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 is located.**
6. Where the source of the salvaged timber is post harvest material, the stumpage rate for each species of timber will be determined using the schedule of Sawlog Stumpage Rates of Post Harvest Material by Forest Zone and Species found in Table 6-3.

Table 6-2 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	Y. PINE	OTHER
North Central	6.08	-	9.14	6.99	-	6.29	10.04	-	5.69
North East	1.45	-	-	-	-	3.58	4.81	-	2.96
North West	1.29	2.36	-	0.97	-	7.21	6.32	-	1.91
South East	8.96	19.38	12.66	9.56	10.60	9.97	12.73	1.18	8.44
South West	7.42	12.08	8.42	7.56	13.78	7.59	10.67	7.48	6.34

Table 6-3 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	Y. PINE	OTHER
North Central	2.53	-	5.08	2.91	-	4.19	5.58	-	2.37
North East	0.61	-	-	-	-	2.39	2.67	-	1.23
North West	0.54	2.10	-	0.40	-	4.81	3.51	-	0.79
South East	3.73	17.23	7.03	3.98	5.89	6.65	7.07	0.78	3.52
South West	3.09	10.74	4.68	3.15	7.66	5.06	5.93	4.99	2.64

6.6 Miscellaneous Stumpage Rates

- 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 or ground 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(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 Alex Fraser (UBC), Aleza Lake (UBC and UNBC) and Fort St. James (UNBC) Research Forests	\$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	\$2,771/ha
	Peace	\$1,284/ha
	Ft. Nelson	\$773/ha
	Mackenzie	\$1,404/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 m³ or less, of merchantable coniferous volume. For pipe line rights-of-way cutting authorities greater than 2 000 m³ 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.

7.3 MPS Selling Prices

1. Selling prices for MPS are based on three-month averages of schedules of lumber values collected and published monthly by Revenue Branch. When the MPS values are compiled and distributed they become an integral part of this manual.

7.3.1 MPS Lumber Average Market Values

1. Monthly market value information for the interior is obtained by Revenue Branch from lumber producers located in each average market value zone. The zones are defined by point of appraisal (see section 4.1.1). Average market values (AMV) for each species are compiled by dividing total sales value by total sales volumes for each zone.
2. The volume that is manufactured to Canadian Lumber Standard/American Lumber Standard (CLS/ALS) sizes is reported in foot board measure (fbm). Lumber manufactured in non-CLS/ALS sizes is adjusted to equivalent CLS/ALS sizes. The total volume for each species includes all sizes and grades of rough and dressed lumber in the green and dried state. Also included is finger-jointed lumber and machine stress rated lumber.
3. The total net sales value for each species or species group is reported in Canadian dollars FOB mill. These sales values are rolled up into three-month averages each month. There is approximately a one-month lag in reporting.

7.3.2 Calculation of Species Lumber Selling Price

1. The total lumber selling price (SP) in $\$/\text{m}^3$ is determined for each species using lumber recovery factors (LRF) from the cruise compilation summary, LRF update add-ons and current applicable lumber average market values (AMV) for the species and zone.
 - a. Zonal LRF update add-ons are found in Table 7-1, by species.
 - b. Lumber AMVs as published every month.
 - c. Calculation of total species lumber selling price.
 - i. Appraisal LRF = Cruise LRF + LRF update add-on
 - ii. Species SP ($\$/\text{m}^3$) = Species AMV($\$/\text{mbm}$)/1000 * Appraisal LRF
 - d. The stand SP is the volume-prorated sum of the species SP.

- e. The real stand SP (RSP) is the stand SP divided by CPIF, as defined in section 7.4.1.

Table 7-1 LRF Update Add-ons for MPS

Species	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9
Lodgepole Pine	105	80	95	102	90
Spruce	126	106	119	123	108
Balsam	118	100	108	116	99
Douglas Fir	95	-	82	92	-
Larch	91	-	82	92	-
Cedar	70	51	64	68	-
Hemlock	72	54	67	73	-
White Pine	89	-	80	88	-
Yellow Pine	-	-	83	96	-

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(4), 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.

Table 7-2 District Average Number of Bidders (DANB)

Forest District	DANB	Forest District	DANB
100 Mile House	4.3	Kootenay Lake	3.1
Arrow Boundary	3.0	Mackenzie	2.4
Cascades	4.5	Nadina	4.4
Central Cariboo	5.3	Okanagan Shuswap	3.5
Chilcotin	1.0	Peace	3.1
Columbia	3.3	Prince George	3.7
Fort Nelson	2.5	Quesnel	4.5
Fort St. James	2.6	Rocky Mountain	3.0
Headwaters	3.3	Skeena Stikine	2.5
Kalum	2.3	Vanderhoof	2.3
Kamloops	4.5		

7.4.2 Market 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 price (MP).

$$\begin{aligned}
 \text{MP} = & [41.74 + 0.162 * \text{RSP} - 2.20 * \text{PC} + 2.52 * \text{FIR} + 2.06 * \ln(\text{VOL}/1000) \\
 & - 11.42 * \text{CY} - 70.00 * \text{HP} - 7.78 * \text{HORSE} - 11.57 * \text{FIRE} - 1.37 * \\
 & \text{CYCLE} - 19.10 * \text{HB} + 41.76 * \text{CEDAR} - 0.530 * [(1/\text{VPT}) * (1 - \text{HB})] \\
 & - 8.44 * [\text{DECID} * (1 - \text{CD})] - 0.0226 * \text{SLOPE} + 0.922 * \text{DANB} - 21.91 * \\
 & \text{DECAY} - 4.98 * \text{Z9} - 6.07 * \text{AUC2008} + 8.22 * \ln(\text{VPT}) + 83.83 * \text{DECK} \\
 & + 0.547 * \text{HWY} - 6.40 * \text{GO} - 6.05 * \text{RG} - 15.93 * \text{ER} - 14.68 * \text{CD}] * \\
 & \text{CPIF}
 \end{aligned}$$

If MP less than \$0.25 then MP = \$0.25

7.4.3 Specified Operations

The following only are identified as specified operations.

1. Rail Haul

- a. Truck to rail transfer \$0.55/m³
- b. Rail Transportation

Origin	Cost Estimate(\$/m ³)	Point of Appraisal
Leo Creek	12.02	Fort St. James
Lovell	15.79	Fort St. James
Bear Lake	22.32	Fort St. James
Minaret Creek	24.31	Fort St. James
Niteal	21.19	Fort St. John

2. Barge/Ferry

- a. Truck
 - i. Reservoir Lakes \$5.60/m³
 - ii. Natural Lakes \$5.60/m³
- b. Crew \$1.18/m³

3. Dump, Boom, Tow, Dewater, Reload

- a. Dump and Boom
 - i. Reservoir Lakes/Marine \$2.61/m³
 - ii. Natural Lakes \$2.54/m³
- b. Tow
 - $\$/m^3 = 1.3496 + 0.0007 * d$
Where d = one way tow distance in kilometers
- c. Dewater and Reload \$0.55/m³

4. Camp Costs (refer to section 4.8.2)

Cost estimate is \$2.58/m³.

5. Skyline Yarding

Cost estimate is \$6.32/m³ 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/m³ the high development cost specified operations estimate (HDC) is calculated as follows:

$$\text{HDC } \$/\text{m}^3 = \text{DC} - 1.20$$

$$\text{If } \text{DC} \leq 3.04 \text{ HDC} = 0$$

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 Director of Operations, BC Timber Sales.
3. Where the Director of Operations, BC Timber Sales 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 Director of Operations, BC timber sales.
4.
 - 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 Director of Operations, BC Timber Sales 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 Director of Operations, BC Timber Sales.
5.
 - 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.
6. The MPS upset stumpage rate determined under subsections, (2), (3), (4)(a)(b), (5)(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 Director of Operations, BC Timber Sales.
8. Notwithstanding 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:

$$\text{USR} = (\text{MP} - \text{SO}) \times (1 - \text{DF})$$

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 <i>Forest Act</i> , 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 (5) 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(4), 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 Director of Operations, BC Timber Sales.

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