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December 1, 2006


BY EMAIL

To: Interior Regional Managers

From: The Honourable Rich Coleman
Minister of Forests and Range

Re: Amendment No. 17 to the *Interior Appraisal Manual*

I hereby approve Amendment No. 17 to the *Interior Appraisal Manual* and attach a copy for your use. The following sections have been amended.

- 
- Section 7.2.4: Terminology has been revised.
 - Section 7.3.2: An additional term has been added.
 - Section 7.4: Terminology has been revised.
 - Section 7.4.1: The list of variables has been updated. A new Table 7-2 required for the new formula has been added.
 - Section 7.4.2: A new market price equation is included.
 - Section 7.4.3.: A new subsection has been added identifying applicable specified operations.
 - Section 7.5.1: Revisions have been made to remove redundant text. In addition, a revision to the formula for timber sale licences with high deciduous content is included.
 - Section 7.5.2: Revisions have been made for specified operations and definitions.
 - Section 7.5.4: Housekeeping changes.

This amendment will come into force on December 1, 2006. Further amendments or revisions to this manual require my approval.



Rich Coleman
Minister

Attachment

pc: Bill Howard, Director, Revenue Branch

Interior Appraisal Advisory Committee



FOR FURTHER INFORMATION CONTACT:

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MANUAL TITLE

Interior Appraisal Manual

REVISION No.

Amendment No. 17

ISSUE DATE

December 1, 2006

MANUAL CO-ORDINATOR

Judy Laton
Revenue Branch

AUTHORIZATION (Name, Title)

W. Howard
Director, Revenue Branch

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

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT TABLE OF CONTENTS	PAGE(S)	COMMENTS
REMOVE INSERT	Table of Contents	i - vi i - vi	After Table of Contents Tab
REMOVE INSERT	Chapter 7	3 - 12 3 - 12	After Chapter 7 Tab
REMOVE INSERT	Index	1 - 4 1 - 4	After Index Tab
INSERT	Minister's Letter and Manual Revision Transmittal		After Amendments Tab

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7.2 MPS Principles and Procedures

7.2.1 MPS Appraisals

1. The MPS upset stumpage rate must be calculated using the *Interior Appraisal Manual* and monthly parameters published by Revenue Branch in effect on the date that the rate is determined (appraisal effective date).
2. Except as provided in Appendix VI, the MPS upset stumpage rate and the bonus bid remain in effect from the date of award of the sale until the sale expires.
3. Except as provided in Appendix VI, all MPS upset stumpage rates on Section 20 timber sale licences advertised on or after November 1, 2003 and Forestry Licences to Cut entered into under section 47.6 (3) of the *Forest Act* are fixed for the term of the timber sale and all extensions.

7.2.2 MPS Stumpage Adjustments

1. Cutting authorities issued under Timber Sale licences that were advertised for sale prior to November 1, 2003, that elected to have, or have adjustable stumpage rates, the stumpage rates are adjusted quarterly on January 1, April 1, July 1, and October 1, of each year.
2. At the time of the quarterly adjustment, the MPS upset stumpage rate will be re-calculated based on the equations applicable for the appraisal effective date and the cutting authority data. The monthly parameters effective for the month of the adjustment will be used in the calculation instead of the original values. Except as provided in Appendix VI, all other data remain unchanged.
3. This process is repeated quarterly until the cutting authority is reappraised.

7.2.3 Reappraisals for MPS Appraisals

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

7.2.4 Methodology

1. Except as provided in Appendix VI, the following methodology must be used for the calculation of the MPS upset stumpage rate:
 - a. Calculate a selling price (SP) of the products that can be recovered from the stand using sections 7.3.1 and 7.3.2 with the variables as defined.
 - b. Calculate the market price using the equation in section 7.4.2, the variables for the stand, and the SP calculated in section 7.3.
 - c. Calculate the MPS upset stumpage rate according to section 7.5.
2. One stumpage rate is determined for all appraised coniferous sawlogs in each cutting authority area except where the MPS upset stumpage rate has been calculated under section 7.5.1 (5).
3. Where the MPS upset stumpage rate has been calculated under section 7.5.1(5) one stumpage rate is determined for all appraised coniferous and deciduous sawlogs in each cutting authority area.
4. All other products are priced using miscellaneous stumpage rates as prescribed under section 6.8.

7.3 MPS Selling Prices

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

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 2.6). Average market values (AMV) for each species are compiled by dividing total sales value by total sales volumes for each zone.

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.

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

The total lumber selling price (SP) in $\$/m^3$ 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.

1. Zonal LRF update add-ons are found in Table 7-1, by species.
2. Lumber AMVs as published every month.
3. Calculation of total species lumber selling price.
 - a. Appraisal LRF = Cruise LRF + LRF update add-on
 - b. Species SP ($\$/m^3$) = Species AMV($\$/mbm$)/1000 * Appraisal LRF
4. The stand SP is the volume-prorated sum of the species SP.
5. 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
Balsam	100	70	91	90	75
Cedar	52	21	47	42	-
Douglas Fir	77	-	65	66	-
Hemlock	54	24	50	47	-
Larch	73	-	65	66	-
Lodgepole Pine	87	50	78	76	66
Spruce	108	76	102	97	84
White Pine	71	-	63	62	-
Yellow Pine	-	-	66	70	-

7.4 Market Price Calculation

The market price is calculated as detailed in this section. It is assumed that the market price will approximate the final stumpage rate, including the bonus bid, based on the variables used.

7.4.1 Market Price Variables

PMP	=	Preliminary MP.
MP	=	Market Price for the cutting authority in (\$/m ³).
RSP	=	Real Stand Selling Price (\$/m ³). See Section 7.3.
ER	=	Exchange Rate (\$Can/\$US). Bank of Canada average monthly rate for the month beginning two months prior to the stumpage rate effective date, as published by Revenue Branch.
Fir	=	Fraction of net coniferous cruise volume that is Douglas fir.
HB	=	Fraction of net coniferous cruise volume that is hemlock and balsam.
Cedar	=	Fraction of net coniferous cruise volume that is cedar.
VPH	=	Total net coniferous cruise volume divided by net merchantable area (m ³ /ha).
VOL	=	Net coniferous cruise volume (m ³).
VPT	=	Weighted average net volume per tree (m ³) by harvest method. For horse and helicopter systems use VPT = 0.49.
Decid	=	Net deciduous cruise volume (m ³) / (net deciduous cruise volume (m ³) + net coniferous cruise volume (m ³)).
Decay	=	Prorated species decay %.
Slope	=	Weighted average harvest method side slope from cruise (%). For horse and helicopter systems use 46.7%.
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.
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 net coniferous cruise volume that is fire damaged.
CYCLE	=	Hauling round trip cycle time from the landing to the point of appraisal or water dumpsite and return (hrs.). See section 4.5.1.
TOW	=	Lake tow distance, one way (km).
SAL	=	Damaged timber salvage dummy variable. If greater than one-third of the net coniferous cruise volume for the cutting authority has been physically damaged by ice storm, blow down, fire, snow press, or attacked by mountain pine beetle or other forest pests, that will result in the death of the attacked trees within one year, as determined by the district manager, then SAL = 1.
Z9	=	Fort Nelson Peace selling price zone dummy variable. If selling price zone is Fort Nelson Peace (9) then Z9 = 1.
AUC2005	=	2005 Auctions dummy variable. AUC2005 = 1.
DANB	=	Average number of bidders by district from the auction dataset (see Table 7-2).
CPI	=	Monthly B.C. Consumer Price Index (Stats Can-P110000).
CPIF	=	CPI/109.3.

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

Forest District	DANB	Forest District	DANB
100 Mile House	5.1	Kootenay Lake	3.2
Arrow Boundary	4.1	Mackenzie	2.3
Cascades	4.9	Nadina	4.6
Central Cariboo	3.7	Okanagan Shuswap	4.8
Chilcotin	3.3	Peace	3.7
Columbia	3.5	Prince George	3.1
Fort Nelson	2.2	Quesnel	4.8
Fort St. James	2.5	Rocky Mountain	4.0
Headwaters	6.1	Skeena Stikine	3.0
Kalum	3.1	Vanderhoof	2.6
Kamloops	6.2		

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).

$$\text{PMP} = [37.65 + 0.199 * \text{RSP} - 9.91 * \text{ER} + 8.49 * \text{Fir} - 12.37 * \text{HB} + 36.40 * \text{Cedar} + 10.87 * (\text{VPH}/1000) + 3.36 * \ln(\text{VOL}/1000) - 2.58 * (1/\text{VPT} * (1 - \text{HB})) - 14.13 * \text{Decid} - 33.81 * \text{Decay}/100 - 0.0305 * \text{Slope} - 2.17 * \text{PC} - 10.97 * \text{CY} - 35.06 * \text{HP} - 13.85 * \text{HORSE} - 21.72 * \text{FIRE} - 2.46 * \text{CYCLE} - 0.0336 * \text{TOW} - 3.40 * \text{SAL} - 3.76 * \text{Z9} + 0.395 * \text{AUC2005} + 0.601 * \text{DANB}] * \text{CPI}/109.3$$

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

$$\text{MP} = \text{PMP} * 0.816 + 0.046$$

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

7.4.3 Specified Operations

The following only are identified as specified operations. Cost estimates from the current *Interior Appraisal Manual* are used for 1, 2 and 3 below.

1. Rail Haul

Rail haul including truck to rail transfer and rail transport.

2. Barge/Ferry

Barge/ferry used for truck haul (private).

Barge/ferry not used for truck haul (private).

Francois Lake Ferry.

3. Dump, Boom, Dewater, Reload

Dump, boom

Dewater and reload.

Note: Towing is addressed in the MPS estimated winning bid equations.

4. Isolated Camp

Cost estimate is \$5.28/m³.

5. Skyline Yarding

Cost estimate is \$10.20/m³ for the volume appraised as skyline.

6. High Development Cost

Where the development cost (DC) borne by the Licensee is greater than \$4.57 the high development cost specified operations (HDC) estimate is calculated as follows:

$$\text{HDC } \$/\text{m}^3 = \text{DC} - 1.60$$

$$\text{If } \text{DC} \leq 4.57 \text{ HDC} = 0$$

7.5 MPS Stumpage Rate

7.5.1 MPS Upset Stumpage Rate

1. Except as provided in subsections (2) (3) (4) (5) (6) and (8), the MPS upset stumpage rates for timber sale licences advertised on or after December 2, 2005, shall be equal to the upset stumpage rate determined under section 7.5.2 by the Timber Pricing Co-ordinator.
2. Where applications for a timber sale licence with an MPS upset stumpage rate determined under section 7.5.1 (1) have been invited but no applications have been received, the MPS upset stumpage rate shall be equal to the variable cost per cubic metre of preparing the timber for sale when that is requested by the Timber Sales Manager.
3. Where the director of BC Timber Sales does not anticipate that applications for a timber sale licence with an MPS upset stumpage rate determined under section 7.5.1 (1) will be received because of market conditions, the MPS upset stumpage rate shall be equal to the variable cost per cubic metre of preparing the timber for sale when that is requested by the Timber Sales Manager.
4. The MPS upset stumpage rate for timber that has been decked for over three years and is administered by the Timber Sales Manager, shall be the prescribed minimum stumpage rate when the Timber Sales Manager in his or her sole discretion decides upon that rate.
5. The MPS upset stumpage rate for timber sale licences with a minimum deciduous content of seventy percent of the net cruise volume, will be the greater of:
 - i. The variable cost per cubic metre of preparing the timber for sale, or
 - ii.
$$\$/\text{m}^3 = \frac{0.70 [(NCV \text{ deciduous (m}^3) \times 0.50 (\$/\text{m}^3)) + (NCV \text{ coniferous (m}^3) \times 26.87 (\$/\text{m}^3))]}{TNCV (\text{m}^3)}$$

where: NCV = net cruise volume (cubic metres)

TNCV = Net cruise volume deciduous + net cruise volume coniferous
6. The variable cost per cubic metre of preparing the timber for sale shall be calculated by the Timber Sales Manager.
7. Notwithstanding anything else 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 Prescribed Minimum Stumpage Rate

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

7.5.4 Total MPS Stumpage Rate

1. 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 (1), (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.

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