

File: 280-20

FEB 28 2006

BY EMAIL

To: Cindy Stern
Regional Manager
Coast Forest Region

From: The Honourable Rich Coleman
Minister of Forests and Range
and Minister Responsible for Housing

Re: Amendment No. 10 to the *Coast Appraisal Manual*

I hereby approve Amendment No. 10 to the *Coast Appraisal Manual*, and attach a copy for your use. The following sections have been amended.



Section 4.2:	Housekeeping. Major centre codes added.
Section 4.2.4:	Procedure to determine haul distance.
Section 5.2.1(1)(b):	Maximum cutting authority area volume increased to 10,000 cubic metres.
Section 5.3.2.1:	This section applies to new appraisals and allows extended road amortization within woodlot licence areas.
Section 6.1.1:	The upset stumpage rate for old growth timber sold under Section 20 is the lesser of the variable cost to prepare the timber for sale and 70 percent of the final estimated winning bid.
Section 6.2.3:	Reserve stumpage rate defined.
Section 6.2.4:	Incorporates administration levy, if applicable.
Section 6.2.5:	Total stumpage rate defined.
Section 7.2	Cutting authority area for salvage of damaged timber may now exceed 2 hectares.
Table 7.5	Housekeeping.
Appendix V:	Paper copies of maps are no longer required.

Cindy Stern

This amendment will come into force the date this memorandum is signed. Further amendments or revisions to this manual require my approval.



Rich Coleman
Minister

Attachment

pc: Bill Howard, Director, Revenue Branch

Coast Appraisal Advisory Committee



FOR FURTHER INFORMATION CONTACT:

George Silvestrini
Sr. Timber Pricing Forester (Coast)
Revenue Branch
Ministry of Forests
Victoria, B.C.
V8W 3E7
Phone: 387-8377
E-mail: george.silvestrini@gov.bc.ca
FAX: 387-5670

MANUAL TITLE

Coast Appraisal Manual

REVISION No.

Amendment No. 10

ISSUE DATE

February 28, 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	PAGE(S)	COMMENTS
REMOVE	Table of Contents	i - iv	After Table of Contents Tab
INSERT	Table of Contents	i - iv	
REMOVE	Chapter 4	3 - 4 13 - 14	After Chapter 4 Tab
INSERT	Chapter 4	3 - 4 13 - 14	
REMOVE	Chapter 5	3 - 4 9 - 10	After Chapter 5 Tab
INSERT	Chapter 5	3 - 4 9 - 10	
REMOVE	Chapter 6	1 - 4	After Chapter 6 Tab
INSERT	Chapter 6	1 - 4	
REMOVE	Chapter 7	5 - 8 11 - 12	After Chapter 7 Tab
INSERT	Chapter 7	5 - 8 11 - 12	
REMOVE	Appendices	7 - 8	After Appendices Tab
INSERT	Appendices	7 - 8	
REMOVE	Index	1 - 4	After Index Tab
INSERT	Index	1 - 4	
INSERT	Minister's Letter and Transmittal		After Amendments Tab

Table of Contents

1 Definitions and Interpretations

1.1 Definitions and Interpretations	1-2
---	-----

2 Scope and Requirements

2.1 Terms of Reference	2-2
2.1.1 Responsibility for Stumpage Determinations.....	2-2
2.2 Numbering System	2-3
2.2.1 Calculation Conventions	2-3
2.2.2 Cutblocks within a Cutting Authority Area	2-3
2.3 Cruise Information	2-5
2.4 Appraisal Data Submission	2-7
2.5 Appraisal Map.....	2-8

3 Appraisals, Reappraisals and Quarterly Adjustments

3.1 Types of Determination.....	3-2
3.2 Appraisals.....	3-3
3.3 Reappraisals	3-4
3.3.1 Changed Circumstances	3-4
3.3.1.1 Changed Circumstance Reappraisal Procedure.....	3-5
3.3.1.2 Effective Date of Changed Circumstance Reappraisal	3-5
3.3.2 Annual Reappraisal of a Road Permit	3-6
3.3.3 Annual Reappraisal of a Salvage Cutting Authority	3-6
3.3.4 Minister's Direction	3-6
3.3.4.1 Minister's Direction Reappraisal Procedure	3-6
3.4 Quarterly Adjustments	3-7
3.5 Fixed Rates and Extensions of Term.....	3-8
3.6 Correctable Errors	3-10
3.7 Redetermination of Stumpage Rate by Agreement.....	3-12

4 Estimated Winning Bid

4.1 Appraisal Methodology.....	4-2
4.2 Market Pricing System (MPS) Variables	4-3
4.2.1 Log Selling Prices	4-5
4.2.1.1 Coniferous Timber	4-5

4.2.2 Log Grade Percentages	4-6
4.2.2.1 Billing History Record	4-6
4.2.2.2 Log Grade Percentage Criteria	4-7
4.2.2.3 Source of Log Grade Percentage for Each Cutting Authority	4-9
4.2.2.4 Damaged Timber	4-12
4.2.3 Stand Selling Price	4-12
4.2.3.1 Stand Selling Price Calculation	4-12
4.2.4 Haul Distance	4-14
4.2.5 Marine Log Transportation	4-14
4.2.5.1 Point of Appraisal	4-14
4.2.5.2 Log Towing	4-15
4.2.5.3 Log Barging and the Determination of Barging Distance (BARGEDIST)	4-15
4.3 Estimated Winning Bid (EWB) Equation	4-18
4.3.1 Estimated Number of Bidders (ENB) Equation	4-18
4.3.2 Steps to Calculating Preliminary Estimated Winning Bid (PEWB)	4-18
4.4 Specified Operations	4-19
4.4.1 Skyline	4-19
4.4.2 Inland Water Transportation	4-19
4.4.3 Tree Crown Modification	4-20
4.4.4 Clayoquot Sound Operating Costs	4-21
4.4.5 Helicopter Single Standing Stem Selection	4-21
4.4.6 Second Growth Coniferous Timber	4-21
4.5 Final Estimated Winning Bid	4-22

5 Tenure Obligation Adjustments

5.1 Tenure Obligation Adjustment	5-2
5.2 Forest Planning and Administration Cost	5-3
5.2.1 Low Volume Cost	5-3
5.3 Road Development Cost	5-4
5.3.1 Road Development Cost Proration	5-5
5.3.1.2 New Road Construction	5-6
5.3.1.3 Road Reconstruction	5-7
5.3.1.4 Total Road Development Cost	5-9
5.3.2 Existing Roads	5-9
5.3.2.1 Extended Road Amortization	5-9
5.3.3 Tabular Cost Estimates	5-9
5.3.3.1 Subgrade Construction	5-10
5.3.3.2 Bridges and Culverts	5-14
5.3.3.3 Additional Stabilizing Material	5-17
5.3.4 Non-tabular Cost Estimates	5-20
5.3.4.1 Data Requirements	5-21
5.4 Road Maintenance Cost	5-23

5.5 Road Use Charges	5-24
5.6 Basic Silviculture Cost	5-26
5.7 'Y' Grade Number	5-27
5.8 Market Logger Road Cost	5-28
5.9 Return to Forest Management	5-29
5.10 Tenure Obligation Adjustment	5-30

6 Stumpage Rate Determination

6.1 Stumpage Rate Calculation for a Cutting Authority Entered into Under Section 20 of the Act	6-2
6.1.1 Indicated Upset Stumpage Rate (IUSR)	6-2
6.1.2 Prescribed Minimum Stumpage Rate	6-2
6.1.3 Upset Stumpage Rate	6-2
6.1.4 Stumpage Rate	6-2
6.1.5 Market Price	6-2
6.2 Stumpage Rate Calculation for a Cutting Authority Other than a Cutting Authority Entered into Under Section 20 of the <i>Act</i> or a Cutting Authority for which a Stumpage Rate is Determined Under Chapter 7	6-3
6.2.1 Indicated Rate (IR)	6-3
6.2.2 Prescribed Minimum Stumpage Rate	6-3
6.2.3 Reserve Stumpage Rate	6-3
6.2.4 Upset Stumpage Rate	6-3
6.2.5 Total Stumpage Rate	6-3
6.2.6 Market Price	6-4

7 Miscellaneous Timber Pricing Policies

7.1 Average Stumpage Rates by District and Species	7-2
7.2 Community Forest Agreements	7-3
7.3 Road Permits	7-4
7.4 Salvage Logging Stumpage Rates	7-6
7.4.1 Levies for Salvage Forestry Licences to Cut Cutting Authorities	7-7
7.5 Cutting Authority Area With Less than 2 500 m ³ of Timber Volume	7-8
7.6 Decked Timber	7-9
7.7 Miscellaneous Stumpage Rates	7-10
7.7.1 Miscellaneous Stumpage Rates	7-10
7.7.2 Special Forest Products	7-10
7.7.3 Marine Log Salvage	7-10
7.7.3.1 Beachcomb	7-10
7.7.3.2 Root Buck	7-10
7.7.3.3 Wahleach Island Catchment Basin	7-10
7.7.3.4 Deadhead Logs	7-10

Appendices

Appendix I Equipment and Labour Rates	A-2
Appendix II Reconstruction and Replacement.....	A-4
Appendix III Development Cost Allocation.....	A-5
Appendix IV Rock Mass Classification	A-6
Appendix V Appraisal Map Content.....	A-8

Index

4.2 Market Pricing System (MPS) Variables

STUMPAGE PRICE	The stumpage price for the cutting authority expressed in $\$/\text{m}^3$.
ALP	Average coniferous log selling price estimate expressed in $\$/\text{m}^3$. This is based upon a consideration of log grades and species for the cutting authority area, and schedules of log market values collected and published by the Revenue Branch.
DFIR 2G	If selling price zone in the appraisal data submission is 52, then DFIR 2G is the fraction of the coniferous cruise volume that is Douglas-fir. If the selling price zone is not 52, then DFIR 2G = 0.
HEMBAL 2G	The fraction of the coniferous cruise volume that is hemlock and balsam, if selling price zone is 52. If selling price zone is not 52, then HEMBAL 2G = 0.
HEMBAL OG	The fraction of the coniferous cruise volume that is hemlock and balsam, if the selling price zone is not zone 52. If the selling price zone is 52, then HEMBAL OG = 0.
SLOPE	The average side slope percentage for that part of the cutting authority area that will not be helicopter yarded.
VPH	The volume of coniferous timber per hectare expressed in m^3/ha . This is calculated by dividing the total net coniferous cruise volume (m^3) by the total merchantable area (ha).
HELI	The fraction of the total net cruise volume, including deciduous volume, of timber in a cutting authority area that must be helicopter yarded or yarded by skyline where logs are fully suspended more than 600 m in a straight line to the centre of the closest possible landing. This is calculated by dividing the total volume of timber that must be helicopter yarded or skyline yarded over 600 m by the total net cruise volume of the cutting authority area.
HAUL	The haul distance expressed in km. This is calculated using the procedures prescribed in section 4.2.4.
PENB	The preliminary estimated number of bidders that would compete for the cutting authority.
VOL	That part of the total net cruise volume in the cutting authority area that is coniferous timber expressed in m^3 except that where the cutting authority is a timber licence or is issued under a licence with an AAC greater than 10 000 m^3 , then VOL = 18 874.
CPIF	The BC Consumer Price Index (P110000) approved by the director for use on the effective date of the appraisal, reappraisal or

quarterly adjustment, divided by the base CPI of 109.3.

CABLE	The fraction of the total net cruise volume of timber in a cutting authority area where terrain conditions require timber to be cable yarded. Cable yarding is an overhead cable system including highlead (spar), mobile (grapple or dropline) and skyline less than 600 m in a straight line horizontal yarding distance. Timber from within road right-of-ways that traverse cutting authority areas will have its volume assigned to the harvest method used to determine the stumpage rate in the same area on which the road lies.
CRUISE	Where the source of the log grades of fifty percent or more of the total net cruise volume has been determined from the cruise compilation, then CRUISE = 1. In all other cases the CRUISE = 0.
LOCATION (Major Centre)	The net cruise volume weighted average straight line distance measured in kilometres between the geographic centre of each part of a cutting authority area and the latitude and longitude co-ordinate listed in table 4-1 that is closest to that part of the cutting authority area.
BARGEDIST	BARGEDIST is the barging distance expressed in kilometres determined under section 4.2.5.3.
NB	The estimated number of bidders that would compete for the cutting authority determined under section 4.3.2.

Table 4-1: Latitude and Longitude Co-ordinates

Degrees and Minutes:		At or Near	Code
Latitude	Longitude		
50°01'	125°15'	Campbell River	CARV
49°11'	121°55'	Chilliwack	CHWK
54°23'	126°39'	Houston	HOUS
50°07'	120°46'	Merritt	MERR
49°10'	123°57'	Nanaimo	NANA
54°18'	130°19'	Prince Rupert	PRRU
54°31'	128°36'	Terrace	TERR
49°16'	123°06'	Vancouver	VANC
48°25'	123°21'	Victoria	VICT

- b. a species selling price for a species of timber in a cutting authority area is the sum of all of the species grade values for that species of timber in the cutting authority area,
 - c. the rounded species selling price is the species selling price for a species of timber in a cutting authority area rounded to the nearest cent,
 - d. a species value is the product of the rounded species selling price multiplied by the species net cruise volume in the cutting authority area, and
 - e. the stand selling price is the quotient of the sum of all of the species values in a cutting authority area divided by the total net cruise volume of all of the species in the cutting authority area.
2. For the purposes of determining a stand selling price:
- a. in the Pemberton, Yale and Nahatlatch timber supply blocks:
 - i. all spruce is deemed to be Engelmann spruce, and
 - ii. the hemlock and balsam average log market value will be used to determine the species grade values for all spruce in the cutting authority area,
 - b. where outside the Pemberton, Yale and Nahatlatch timber supply blocks:
 - i. Engelmann spruce is identified as the predominant spruce species in the cruise of the cutting authority area, or
 - ii. the district manager determines that Engelmann spruce is the predominant spruce species in the cutting authority area,

the hemlock and balsam average log market values will be used to determine the species grade values of all spruce in the cutting authority area,
 - c. where a cutting authority area is located on Cortes Island or on an Island between Vancouver Island and the British Columbia mainland west of a line drawn between Grief Point near Powell River and the Tsawwassen ferry terminal, and south of 50 degrees north latitude, the second growth Douglas-fir average log market values will be used to calculate the species selling price for all Douglas-fir timber.

4.2.4 Haul Distance

1. The haul distance (HAUL) for a cutting authority area being appraised or reappraised shall be determined as follows:
 - a. For each cutblock in the cutting authority area from which any timber may be removed by road from that cutblock:
 - i. determine for that cutblock the point that is the closest point on a road to the geographical centre of the cutblock,
 - ii. determine the shortest distance by road from the point on the road determined in subparagraph (i) of this paragraph to the appraisal log dump for that cutblock, measured in kilometres (km) and rounded to the nearest 0.1 km,
 - iii. weight for that cutblock the distance determined in subparagraph (ii) of this paragraph by the net cruise volume of timber on the cutblock.
 - b. Determine the average weighted distance of all the cutblocks for which a weighted distance was determined in subparagraph (iii) of paragraph (a), rounded to the nearest 0.1 km.
 - c. HAUL is the average weighted distance calculated in paragraph (b) of this subsection plus the rehaul distance if required for inland water transportation as provided for under section 4.4.2.
 - d. Where a rehaul is required for inland water transportation, the appraisal log dump is the final log dump at the end of the rehaul.

4.2.5 Marine Log Transportation

4.2.5.1 Point of Appraisal

1. The Points of Appraisal are:

<u>Points of Appraisal</u>	<u>Location</u>
Alberni	At the head of Alberni Inlet.
Chemainus	At Chemainus Bay.
Gambier Island	At Gambier Harbour on Gambier Island.
Pitt River Bridge	At the confluence of the Fraser and Pitt Rivers.

5.2 Forest Planning and Administration Cost

1. The forest planning and administration cost is based on surveyed expenses at the corporate licensee level including all aspects of executive and administrative expenses at the head office attributable to the harvest of Crown timber. The kinds of expenses that were taken into consideration to calculate this cost were:
 - a. head office general and administrative expenses (\$3.38/m³).
 - b. logging department, log trading and log supply expenses (\$3.98/m³).
 - c. fees and taxes applicable to stumpage bearing timber (\$0.83/m³).
 - d. engineering and forestry overhead expenses (\$4.77/m³).
2. The total forest planning and administration cost is \$12.96/m³.

5.2.1 Low Volume Cost

1. A low volume cost of \$7.51/m³ may be included in the tenure obligation adjustment where:
 - a. the cutting authority area being appraised or reappraised is the subject of cutting authority issued under either a licence or its parent licence prior to subdivision that provides for an allowable annual cut of not more than 10 000 m³ of Crown timber, and
 - b. the total net cruise volume of the cutting authority area is not more than 10 000 m³.

5.3 Road Development Cost

1. Except as provided in section 5.3.2, where a road development provides access to Crown timber a road development cost may be estimated for new road construction, and road reconstruction.
2.
 - a. Except as provided in subsections (2)(b) and (2)(c) of this section the total net cruise volume is used to calculate the unit cost for new road construction and road reconstruction in an appraisal or reappraisal of a cutting authority area.
 - b. Where a road development project was not taken into consideration in a prior appraisal or reappraisal of the cutting authority area, the remaining volume shall be used to calculate the road development unit cost for that project in the reappraisal of the cutting authority area.
 - c. Where the reappraisal is because of sudden and severe damage the road development cost is calculated as follows:
 - i) The road construction project costs prior to the sudden and severe damage reappraisal are totalled,
 - ii) The sum of those project costs is the total project cost,
 - iii) From the total project cost calculated in subsection 2(c)(i) of this section is subtracted the product of the total project cost multiplied by the total volume of timber in the billing history record of the cutting authority area on the effective date of the reappraisal, divided by the total net cruise volume of the cutting authority area,
 - iv) The difference calculated in subsection (2)(c)(iii) of this section is then divided by the sum of the remaining volume plus the volume of timber that was suddenly and severely damaged,
 - v) The calculation of the road development cost expressed as an algorithm is:

$$\text{Road Development Cost} = \frac{\text{total project cost} - (\text{total project costs} \times \text{volume in the billing history record}) / \text{total net cruise volume}}{\text{remaining volume} + \text{volume suddenly and severely damaged}}$$

3. Except as further provided for in this manual the road development cost for a road development may only be used in the appraisal or reappraisal of a tributary cutting authority area.
4. A road development cost may be amortized in accordance with section 5.3.2.1.

5.3.1.4 Total Road Development Cost

1. The total road development cost is the sum of the total new road construction unit cost plus the total road reconstruction unit cost.

5.3.2 Existing Roads

1. The following roads may not be considered in the appraisal or reappraisal of a cutting authority area:
 - a. a constructed road that has been previously included in an appraisal or reappraisal of another cutting authority area,
 - b. a road previously constructed to access private timber, and
 - c. a road previously constructed in whole or in part for a purpose unrelated to the harvesting of timber on the cutting authority area being appraised or reappraised.

5.3.2.1 Extended Road Amortization

1. Subject to subsection (2) of this section **for new appraisals** where the total road development cost calculated in an appraisal or reappraisal is greater than \$14.00/m³, the licensee and regional manager may agree that only a portion of an estimated road development cost will be used in the appraisal or reappraisal of the cutting authority area and that the balance of the estimated road development cost will be used in the appraisal or reappraisal of one or more tributary cutting authority areas.
2. Future tributary timber included in the extended road amortization agreement must be **within a woodlot licence area, or** in an approved cutting permit or cutblocks shown in the licensee's forest development plan or forest stewardship plan in effect on the appraisal effective date.
3. The agreement must provide that:
 - a. it may not be changed unless by mutual agreement, and
 - b. it is entered into only for the purposes of calculating a stumpage rate and confers no obligation on the Crown to compensate the licensee for any unamortized costs.

5.3.3 Tabular Cost Estimates

1. A tabular cost estimate must be calculated on the basis that the construction project will be completed using commonly used logging road construction practices and that the roads will have single lane width roads, turnouts and landings.

2. Weighted averages for each variable (eg. uphill side slope, rock, etc.) are applied to each road section. Averages are obtained by weighting the cross-section measurements taken at representative points along the road by the applicable road section length. The length of bridges and end haul sections in each section of a road that are appraised under section 5.3.4 may not be used in the calculation of this estimate.

5.3.3.1 Subgrade Construction

1. The estimated cost per kilometre for subgrade construction is provided for each combination of construction category and uphill side-slope for two rock mass classification categories, 'RMC 5 Only' and 'Other RMC's'.
2. Construction category (CC) is determined on the basis of the percent rock in relation to the total volume of all materials.
3. The percent rock is determined as follows:

$$\% \text{ rock} = \frac{h^2}{H^2} * 100\%$$

Where:

h = the vertical cut height of all rock measured from the bottom of the ditch

H = the total vertical cut height of all materials including organic layers, glacial till and hardpan measured from the bottom of the ditch

4. Construction category may show a range of variation ($\pm$ one CC) within any section length, and is recorded to the nearest integer. Hardpan is CC1, whether drilled and blasted or not. Rippable rock and boulders may occur in CC2 to CC6.
5. The following table defines the construction categories.

Table 5-1: Construction Categories

Construction Category (CC)	1	2	3	4	5	6
% rock	0	1-12	13-37	38-62	63-87	88+

6. Rock mass classification (RMC) is based on the physical characteristics of rock encountered in forest road development and is the subject of a report commissioned by the Forest Engineering Research Institute of Canada in 1978 and prepared by Piteau & Associates/Geotechnical Consultants.

Stumpage Rate Determination

6

6.1 Stumpage Rate Calculation for a Cutting Authority Entered into Under Section 20 of the Act

Sections 6.1.1 through 6.1.5 are the policies and procedures for determining a stumpage rate for a cutting authority that is entered into under section 20 of the *Act*.

6.1.1 Indicated Upset Stumpage Rate (IUSR)

1. The IUSR for a timber sale licence shall be determined by the timber sales manager and shall be the greater of:
 - a. The variable cost to prepare the timber for sale, or
 - b. Seventy percent of the final estimated winning bid (FEWB) for that timber sale licence calculated according to section 4.5.

For timber sale licences containing greater than 20 % mature coniferous timber, the IUSR is the lesser of a. and b., above.

2. The variable cost per cubic metre of preparing the timber for sale shall be calculated by the timber sales manager.

6.1.2 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.

6.1.3 Upset Stumpage Rate

The upset stumpage rate for a timber sale licence is the greater of:

1. The indicated upset stumpage rate, or
2. the prescribed minimum stumpage rate.

6.1.4 Stumpage Rate

The stumpage rate is the total of the upset stumpage rate plus the bonus bid, if any, that must be paid by the licensee.

6.1.5 Market Price

The stumpage rate is the market price.

6.2 Stumpage Rate Calculation for a Cutting Authority Other than a Cutting Authority Entered into Under Section 20 of the Act or a Cutting Authority for which a Stumpage Rate is Determined Under Chapter 7

Sections 6.2.1 through 6.2.5 are the policies and procedures for determining a stumpage rate for a cutting authority other than timber sale licence entered into under section 20 of the *Act* or a cutting authority for which a stumpage rate is determined under chapter 7.

6.2.1 Indicated Rate (IR)

1. The IR is the difference between the final estimated winning bid (FEWB) determined for the cutting authority under section 4.5 and the tenure obligation adjustment (TOA) determined under section 5.10.
2. Expressed as an equation:

$$\text{IR} = \text{FEWB} - \text{TOA}$$

6.2.2 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.

6.2.3 Reserve Stumpage Rate

The **reserve** stumpage rate for a cutting authority is determined by selecting the greater of:

1. the indicated rate, or
2. the prescribed minimum stumpage rate.

6.2.4 Upset Stumpage Rate

The **upset** stumpage rate is the total of the **reserve** stumpage rate plus **any administration levies which may be charged under section 7.5.1**.

6.2.5 Total Stumpage Rate

The total stumpage rate is the upset stumpage rate plus the bonus bid, if any, that must be paid by the licensee.

6.2.6 Market Price

The stumpage rate is the market price.

6. Where there are no stumpage billing history records from which the stumpage rate may be determined under 4, and the licence that the cutting authority is issued under has an allowable annual cut of Crown timber less than 5 000 m³ per year the stumpage rate for a road permit is the weighted average sawlog stumpage rate of all the cutting authorities, other than road permits, that are for licences that have an allowable annual cut of less than 5 000 m³ in the same forest district as the area to which the road permit applies.
7. The cost of a road constructed under a road permit may be eligible for inclusion as a tenure obligation adjustment under chapter 5 in the appraisal of the first tributary cutting authority.
8. All road permits will be reappraised in accordance with section 3.3.2.

7.4 Salvage Logging Stumpage Rates

1. The source of salvaged timber is:
 - a. Post Harvest Material:
 - i. wooden culverts and bridges, and
 - ii. post logging residue, and
 - b. Damaged Timber:
 - i. blowdown green and aged timber, and
 - ii. fire, disease, insect or physically damaged timber.
2. The qualifying criteria and methodology for calculating salvage logging stumpage rates for round logs is specified below:
 - a. post harvest material must not be combined in the same cutting authority area with timber damaged through natural events.
 - 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 adjacent or contiguous to an existing cutting authority area.
 - c. the total cutting authority area for damaged salvage harvesting may vary in size but individual clearcut openings within the cutting authority area shall not exceed two hectares.
 - d. only damaged trees and hazard trees as approved by the Ministry may be removed on a damaged timber salvage cutting permit.
 - e. 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.
 - f. salvage can not occur on a road right-of-way which has an active timber mark associated with it.
 - g. the stumpage rate will be fixed for a period not exceeding one year.
3. Where the source of the salvaged timber is damaged timber, the stumpage rate for each species of the salvaged timber in a forest district will be determined using

schedule of average sawlog stumpage rates for damaged timber approved by the Director.

4. Where the source of the salvaged timber is post harvest material, the stumpage rate for each species of timber in a forest district will be determined using the schedule of average sawlog stumpage rates for post-harvest material approved by the Director.
5. The salvage logging stumpage rate for any district and species shall not be less than \$4.00/m³.

7.4.1 Levies for Salvage Forestry Licences to Cut Cutting Authorities

1. 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.
2. A basic silviculture levy may be added to the reserve stumpage rate. The levy is equal to the district manager's cost estimate of silviculture liability to be incurred by the Crown.

7.5 Cutting Authority Area With Less than 2 500 m³ of Timber Volume

1. Where a cutting authority area has less than 2 500 m³ of timber the stumpage rate may be determined:
 - a. by estimating the volume of each species of the timber in the cutting authority area appraised,
 - b. by using the stumpage rates that the Revenue Branch determines under section 7.1 for each of those species in the forest district in which the cutting area is located, and
 - c. by calculating the weighted average stumpage rate for all of the species of timber in the cutting authority area.
2. Where an estimate of the species volume has not been made, the species stumpage rate determined under section 7.1 must be used for the cutting authority area.
3. The stumpage rate calculated under this section is not adjusted quarterly.

Table 7-1: Miscellaneous Stumpage Rates

Species	Region Product Code	Product	Stumpage Rate (\$/m ³)
Deciduous	N/A	All (except grades 'Y', 'Z')	\$1.00
Yew	N/A	All	\$0.25
All Species	N/A	Grade 'Y'	\$0.25
All Species	BC	Beachcomb	\$0.70
All Species	RB	Root buck	\$7.80
All Species	DH	Wahleach Island catchment basin	\$0.25
All Species	DH	Deadhead logs	\$0.25

Table 7-2: Special Forest Products Stumpage Rates

Species	Region Product Code	Product	Stumpage Rate
All Species	CA	Cants (produced from dead and down post-logging residue)	\$9.60/m ³
All Species	FW	Firewood (round or split) - maximum length 1.2 m	\$1.00/m ³
Cedar	MT	Mining Timbers - maximum length 2.4 m	\$3.00/m ³
All Species (except Cedar)	PR	Posts and Rails (split and round)	\$1.20/m ³
Cedar	PR	Posts and Rails (split and round)	\$3.00/m ³
All Species	SB	Shake and Shingle Bolts, Blocks and Blanks	\$5.30/m ³
All Species	SK	Shakes	\$6.00/m ³
All Species	SS	Stakes and Sticks (Car Stakes, Grape Stakes, Hop Poles, Lagging (split, Orchard Props, Pickets and Palings, Stakes and Stocks (sticks))	\$1.20/m ³
All Species	XM	Christmas Trees	Less than 3 m - \$0.20 each 3 m to 5 m - \$1.00 each greater than 5 m - \$1.50 each

Cants are produced from dead and down post-logging material that would not make a sawlog as determined by the regional manager.

This page is intentionally left blank.

Surface Hardness	Average Block Diameter				
	0 to 3"	3" to 6"	6" to 1'	1' to 4'	4'+
R2	RMC1	RMC2	RMC2	RMC2	RMC2
R3	RMC2	RMC2	RMC3	RMC3	RMC3
R4	RMC2	RMC3	RMC4	RMC4	RMC4
R5	RMC3	RMC4	RMC5	RMC5	RMC5

Description of RMC Values:

- RMC1** Rock crumbles under firm blows with the point of a geological pick and can be peeled by a pocket knife (R1). The average block diameter is not important. The rock may be harder (R2) but must have an average block diameter of less than 3 inches. This rock can be excavated by free digging or ripping.
- RMC2** Rock can be scraped and peeled by a pocket knife with difficulty and shallow indentations (i.e., 1/16 inch to 1/8 inch) can be made by a firm blow of a geological pick (R2) and has an average block diameter greater than 3 inches. The rock may be somewhat harder (R3) but must have an average block diameter less than 6 inches or hard (R4) and have an average block diameter less than 3 inches. The rock is usually rippable.
- RMC3** Rock cannot be scraped or peeled with a pocket knife. Hand-held specimen can be fractured with a single firm blow of the hammer end of a geological pick (R3) and has an average block diameter greater than 6 inches. Rock may be harder (R4) but must have an average block diameter of 3 to 6 inches or very hard (R5) and have an average block diameter of less than 3 inches. The rock is usually not rippable.
- RMC4** Hand-held specimen requires more than one blow with hammer end of geological pick to fracture (R4) and has an average block diameter greater than 6 inches. Rock may be very hard (R5) but must have an average block diameter of 3 to 6 inches. The rock must be blasted.
- RMC5** Hand-held specimen is very hard and requires many blows of the hammer end of a geological pick to fracture it (R5) and has an average block diameter greater than 6 inches. The rock must be blasted.

Appendix V Appraisal Map Content

1. The appraisal map(s) submitted with the appraisal data submission must be at a scale of 1:5000 or 1:10000. Additional maps at other scales may also be included as required.
2. At a minimum, the maps shall provide the following information:
 - a. Cutting permit and block boundaries.
 - b. Delineation of timber to be harvested and timber to be retained within the cutting authority area.
 - c. Delineation of areas by harvest method.
 - d. Delineation of areas where tree crown modification is planned.
 - e. The geographic centre and common junction of the permit for truck haul distance calculations.
 - f. Existing roads.
 - g. Roads to be constructed.
 - h. Location of roads/structures that are the subject of non-tabular estimates.
 - i. Location, size and types of culverts and bridges.
3. For appraisal data submission where an extension is requested reference may be made to the original map submitted.
4. The appraisal map may be attached to the initial appraisal data submission in electronic format prior to the cutting permit being approved.

Index

A

Additional Stabilizing Material, 5-17
 Annual Reappraisal of a Road Permit, 3-6
 Appendices, A-1
 Appraisal Data Submission, 2-7
 Appraisal Map, 2-8
 Appraisal Methodology, 4-2
 Appraisals, 3-3
 Average Stumpage Rates by District and Species, 3-9, 7-2

B

Basic Silviculture Cost, 5-26
 Beachcomb, 7-10
 Billing History Record, 4-6
 Bridge Cost Estimates, 5-7
 Bridges and Culverts, 5-14

C

Calculation Conventions, 2-3
 Capping, 5-20
 Changed Circumstance Reappraisal Procedure, 3-5
 Changed Circumstances, 3-4
 Clayoquot Sound Operating Costs, 4-21
 Coniferous Timber, 4-5
 Correctable Errors, 3-10
 Cruise Information, 2-5
 Culverts, 5-17
 Cutblocks within a Cutting Authority Area, 2-3
 Cutting Authority Area With Not More than 2 500 m³ of Timber Volume, 7-8

D

Damaged Timber, 4-12
 Data Requirements, 5-21
 Deadhead Logs, 7-10
 Decked Timber, 7-9
 Definitions and Interpretations, 1-2
 Detail Engineered Road Cost Estimates, 5-6
 Development Cost Allocation, 0-5

E

Effective Date of Changed Circumstance Reappraisal, 3-5
 Estimated Number of Bidders (ENB) Equation, 4-18
 Estimated Winning Bid (EWB) Equation, 4-18
 Existing Roads, 5-9
 Extended Road Amortization, 5-9

F

Final Estimated Winning Bid, 4-22
 Fixed Rates and Extensions of Term, 3-8
 Forest Planning and Administration Cost, 5-3

H

Haul Distance, 4-14
 Helicopter Single Standing Stem Selection, 4-21

I

Indicated Rate (IR), 6-3
 Indicated Upset Stumpage Rate (IUSR), 6-2
 Inland Water Transportation, 4-19

L

Log Bridges, 5-14
 Log Grade Percentage Criteria, 4-7
 Log Grade Percentages, 4-6
 Log Selling Prices, 4-5
 Log Towing, 4-15

Low Volume Cost, 5-3

M

Marine Log Salvage, 7-10

Marine Log Transportation, 4-14

Market Logger Road Cost, 5-28

Market Price, 6-2, 6-4

Market Pricing System (MPS) Variables,
4-3

Market Stumpage Rate, 6-2

Minister's Direction, 3-6

Minister's Direction Reappraisal Procedure,
3-6

Miscellaneous Stumpage Rates, 7-10

N

New Road Construction, 5-6

Non-tabular Cost Estimates, 5-20

O

Order-in-Council, 3-2

P

Permanent/Portable Bridges, 5-15

Point of Appraisal, 4-14

Prescribed Minimum Stumpage Rate, 6-2,
6-3

Q

Quarterly Adjustments, 3-7

R

Reappraisals, 3-4

Reconstruction and Replacement, A-4

Reserve Stumpage Rate, 6-3

Responsibility for Stumpage
Determinations, 2-2

Return to Forest Management, 5-29

Road Development Cost, 5-4

Road Development Cost Proration, 5-5

Road Maintenance Cost, 5-23

Road Permits, 7-4

Road Reconstruction, 5-7

Road Use Charges, 5-24

Rock Mass Classification, 5-10

Root Buck, 7-10

S

Salvage Logging Stumpage Rates, 7-6

Second Growth Coniferous Timber, 4-21

Skyline, 4-19

Source of Log Grade Percentage for Each
Cutting Authority, 4-9

Special Forest Products, 7-10

Specified Operations, 4-19

Stand Selling Price, 4-12

Stand Selling Price Calculation, 4-12

Stumpage Rate Calculation for a Cutting
Authority Entered into Under Section 20 of
the Act, 6-2

Stumpage Rate Calculation for a Cutting
Authority Other than a Cutting Authority
Entered into Under Section 20 of the *Act* or
a Cutting Authority for which a Stumpage
Rate is Determined Under Chapter 7, 6-3

Subgrade Construction, 5-10

Subgrade Cost Estimates, 5-11

T

Tabular Cost Estimates, 5-9

Tabular road cost estimates, 5-6

Tenure Obligation Adjustment, 5-2, 5-30

Terms of Reference, 2-2

Timber Licence, 3-9

Timber Sale Licences, 3-8

Total Stumpage Rate, 6-3

Total Volume of less than 2 500 m³, 7-8

Towing Points of Origin, 4-16

Tree Crown Modification, 4-20

Tributary, 5-4

Types of Determination, 3-2

U

Upset Stumpage Rate, 6-2, 6-3

W

Wahleach Island Catchment Basin, 7-10

Woodlot Licence, 4-8

Woodlots, 3-8

Y

'Y' Grade Number, 5-27

This page is intentionally left blank.