

File: 280-20

March 31, 2006

**BY EMAIL**

To: Cindy Stern  
Regional Manager  
Coast Forest Region

From: The Honourable Rich Coleman  
Minister of Forests and Range

Re: **Amendment No. 11 to the *Coast Appraisal Manual***

I hereby approve Amendment No. 11 to the *Coast Appraisal Manual*, and attach a copy for your use. The following sections have been amended.



- Section 1.1: Housekeeping. Definitions clarified.
- Section 3.3.3: Reappraisals for salvage rates on April 1, 2006, section reference updated and the \$4,00 per cubic metre minimum removed.
- Section 4.4.5: Clarification on the use of helicopter single standing stem selection in appraisals.
- Section 7.3.5.b: Housekeeping.
- Section 7.4.5: Subsection has been deleted.

This amendment will come into force on April 1, 2006. 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 and Range  
Victoria, B.C.  
V8W 3E7  
Phone: 387-8377  
E-mail: george.silvestrini@gov.bc.ca  
FAX: 387-5670

<b>MANUAL TITLE</b> Coast Appraisal Manual	
<b>REVISION No.</b> Amendment No. 11	<b>ISSUE DATE</b> April 1, 2006
<b>MANUAL CO-ORDINATOR</b> Judy Laton Revenue Branch	
<b>AUTHORIZATION (Name, Title)</b> 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 - ii	After Table of Contents Tab
INSERT	Table of Contents	i - ii	
REMOVE	Chapter 1	1 - 4	After Chapter 1 Tab
INSERT	Chapter 1	1 - 4	
REMOVE	Chapter 3	5 - 6	After Chapter 3 Tab
INSERT	Chapter 3	5 - 6	
REMOVE	Chapter 4	21 - 22	After Chapter 4 Tab
INSERT	Chapter 4	21 - 22	
REMOVE	Chapter 7	3 - 8	After Chapter 7 Tab
INSERT	Chapter 7	3 - 8	
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 Salvage Logging Stumpage Rates .....	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

# **Definitions and Interpretations** **1**

---

## 1.1 Definitions and Interpretations

In this manual:

"**Act**" means *Forest Act*;

"**Appraisal Data Submission**" means the information required by the person who determines the stumpage rate to determine that rate including the appraisal map, appraisal summary report, cruise compilation and any other information required by the regional manager or district manager in the form required by the director, signed by a registered professional forester (RPF) or registered forest technologist (RFT), registered with the Association of British Columbia Forest Professionals;

"**Billing history record**" means a record of log scale data **derived from a record kept by the Revenue Branch of log scale data** reported on stumpage invoices issued by the Revenue Branch for timber scaled under section 94 of the *Act*;

"**BCTS**" means British Columbia Timber Sales;

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

"**Detailed engineering**" means non-tabular;

"**Cutting authority**" means:

- (a) a cutting permit issued under a forest licence, a timber sale licence, a timber licence, tree farm licence, a community forest agreement, a community salvage licence, a woodlot licence, or forestry licence to cut,
- (b) a timber sale licence **that does not provide for the issuance of a cutting permit,**
- (c) a licence to cut, or
- (d) a road permit;

"**Cutting authority area**" means the area where timber may be harvested under authority of:

- (a) a cutting **permit,**
- (b) a timber sale licence **that does not provide for the issuance of a cutting permit,**
- (c) a licence to cut, or
- (d) a road permit;

"**Deciduous timber**" means timber that is any of the alder, birch, cottonwood and maple species;

"**Director**" means director of Revenue Branch of the Ministry of Forests;

"**District manager**" means district manager or district manager's designate;

"**Licensee**" means the holder of a cutting authority;

"**Manual**" means *Coast Appraisal Manual*;

"**Mature coniferous timber**" means coniferous timber that is 141 years old or older;

"**Minister**" means Minister of Forests;

"**Ministry**" means Ministry of Forests;

"**Net cruise volume**" means the gross volume of all species listed in section 4.2.3(1), plus alder, birch, cottonwood and maple in the cutting authority area minus the volume of decay, waste and breakage in that timber unless otherwise specified in the *Cruising Manual*;

"**Regional manager**" means regional manager or regional manager's designate;

"**Regulations**" means regulations under the *Act*;

"**Remaining volume**" means the total net cruise volume of a cutting authority area minus the total volume of timber in the billing history record of the cutting authority area on the effective date of the reappraisal of the cutting authority area;

"**Revenue Branch**" means revenue branch of the ministry;

"**Second growth coniferous timber**" means coniferous timber that is less than 141 years old;

"**Selling price zone 51**" means the table of coast market pricing system log values for mature logs, approved by the director, Revenue Branch;

"**Selling price zone 52**" means the table of coast market pricing system log values for second growth logs, approved by the director, Revenue Branch;

"**Stumpage price**" means the market stumpage price;

"**Stumpage rate**" means market stumpage rate;

"**Skyline**" means any method of yarding where the logs are fully suspended above the ground by a short span, long span, or multi-span system using a carriage with standing or running lines;

**"Total net cruise volume"** of a cutting authority area (tnvc) is the product of the net cruise volume per hectare of the cutting authority area (ncv/ha) multiplied by the total merchantable timbered area to be harvested under the cutting authority (tmta). Expressed

as an equation: 
$$\text{tnvc} = \frac{\text{ncv}}{\text{ha}} \times \text{tmta} ;$$

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

**"Unit cost"** means cost estimate expressed in dollars per cubic metre.

- (ii) twenty-five percent of the area of the cutting authority area as it was prior to the addition or deletion of the land, or
  - d. at least twenty-five percent of the total net cruise volume that was used in the most recent appraisal or reappraisal of the cutting authority area has been suddenly and severely damaged, unless the timber was damaged by a fire for which the licensee was responsible and the licensee failed to comply with any of sections 75 through 95 of the *Forest Practices Code of British Columbia Act* or the *Forest Fire Prevention and Suppression Regulation*.
2. The licensee must notify the district manager immediately of a changed circumstance.
3. Where the district manager believes that a changed circumstance has occurred, the district manager will notify the licensee of that belief.
4. A cutting authority area other than a cutting authority area that is the subject of a road permit or a cutting authority with fixed rates, must be reappraised when a changed circumstance has occurred.
5. Where a cutting authority area is reappraised because of a changed circumstance, any bonus bid in existence prior to the reappraisal does not change and remains in effect.

#### 3.3.1.1 Changed Circumstance Reappraisal Procedure

1. Where the cutting authority area must be reappraised because of a changed circumstance, the licensee shall submit to the district manager an appraisal data submission.
2. Thereafter, the reappraisal procedure shall be the procedure required by section 3.2(2) through 3.2(8).

#### 3.3.1.2 Effective Date of Changed Circumstance Reappraisal

1. Except as provided in subsections (2) and (3) of this section, the effective date of the reappraisal under section 3.3.1 is the first day of the month following the date of the licensee's notification to the district manager or the district manager's notification to the licensee that a changed circumstance has occurred.
2. Where the changed circumstance is because of amendments to the cutting authority area referred to in subsection 3.3.1 (1)(c), the reappraisal is effective on the first day of the month following the date that the district manager approves the last amendment.

3. Where the changed circumstance is because of sudden and severe damage to the appraised timber referred to in subsection 3.3.1(1)(d), the effective date of the reappraisal is the first day of the month following the date of the occurrence of the damage.

### **3.3.2 Annual Reappraisal of a Road Permit**

1. Subject to section 7.3, a cutting authority area that is the subject of a road permit must be reappraised effective November 1, 2004 and annually on February 1<sup>st</sup> of every year thereafter.
2. The stumpage rate determined under subsection (1) of this section will be a fixed stumpage rate until the cutting authority area is reappraised.

### **3.3.3 Annual Reappraisal of Salvage Logging Stumpage Rates**

1. **Where a cutting authority area has stumpage rates determined under section 7.4 excluding those cutting authority areas subject to a bonus bid or bonus offer, that cutting authority area** must be reappraised effective **April 1, 2006** and annually on March 1st of every year thereafter.
2. The stumpage rate determined under subsection 1 of this section will be a fixed stumpage rate until the cutting authority area is reappraised.

### **3.3.4 Minister's Direction**

1. The Minister may direct that a reappraisal be made at any time and that the redetermined stumpage rate will be effective on any future date.
2. The Minister may specify criteria and procedures for an appraisal or reappraisal.

#### **3.3.4.1 Minister's Direction Reappraisal Procedure**

1. Where the Minister directs a reappraisal to be made under section 3.3.4, and the district manager requests the licensee to submit an appraisal data submission, the submission shall be submitted to the district manager within forty-five days of the district manager's request.
2. Thereafter the reappraisal procedure shall be the procedure required by section 3.2 (2) through 3.2 (8).

#### 4.4.4 Clayoquot Sound Operating Costs

1. For the purposes of this section the Clayoquot Sound area is:

That part of the Hesquiat Peninsula, Esowista Peninsula, and the Islands, sea and all lands and waters draining into the Pacific Ocean from the height of land between Escalante Point and Quisitis Point.

2. An adjustment of \$13.31/m<sup>3</sup> will be included in an appraisal or a reappraisal of a cutting authority area that is located entirely within the Clayoquot Sound area.

#### 4.4.5 Helicopter Single Standing Stem Selection

1. In this manual helicopter single standing stem selection means the harvesting of standing single trees that have been marked, limbed, undercut and wedged and then broken from the stump and removed using a helicopter.
2. This adjustment may only be included in the appraisal or reappraisal of a cutting authority area if:
  - a. helicopter single standing stem selection is the only harvest method that has been permitted by the district manager to harvest timber in the cutting authority area, and
  - b. is the only harvest method used to harvest all of the timber in the cutting authority area.
3. The adjustment for helicopter single standing stem selection includes the cost of marking, climbing, limbing, undercutting, wedging, breaking and removal of the tree by helicopter.
4. The adjustment for helicopter single standing stem selection is \$37.78/m<sup>3</sup>.

#### 4.4.6 Second Growth Coniferous Timber

1. A second growth coniferous timber adjustment will be included in an appraisal or reappraisal of the cutting authority area as follows:
  - a. For an appraisal where the effective date of the stumpage rate determined is:
    - i. between February 29, 2004 and December 31, 2006, the adjustment shall be \$3.67/m<sup>3</sup>;
    - ii. between January 1, 2007 and June 30, 2007, the adjustment shall be \$1.84/m<sup>3</sup>.
  - b. No adjustment will be included in an appraisal or a reappraisal of a cutting authority area where the effective date of the stumpage rate determined is after June 30, 2007.

## 4.5 Final Estimated Winning Bid

1. Subject to subsection 3 of this section the Final Estimated Winning Bid (FEWB) is the difference between the preliminary estimated winning bid and the total of the specified operations adjustments that are applicable to the appraisal or reappraisal of the cutting authority.
2. Expressed as an equation:

$$\text{FEWB} = \text{PEWB} - \text{SOA}$$

Where:

PEWB = The Preliminary Estimated Winning Bid determined under section 4.3.2.

SOA = The sum of specified operations adjustments considered in an appraisal or a reappraisal of a cutting authority area as may be calculated under sections 4.4.1 through 4.4.6 and expressed in  $\$/\text{m}^3$ .

3. Where the FEWB calculated is less than  $\$0.25/\text{m}^3$ , then the FEWB shall be  $\$0.25/\text{m}^3$ .

## 7.2 Community Forest Agreements

1. For community forest agreements issued under sections 43.2, 43.4 or 43.51 of the *Act* and associated road permits, the coniferous sawlog stumpage rate for each species of timber will be:

Balsam	6.97
Hemlock	6.14
Cedar	8.51
Cypress	8.00
Fir	4.37
Spruce	4.07
All Pine	6.47

This provision expires on December 31, 2006.

Section 7.3, 7.4, 7.4.1, 7.5 and 7.6 do not apply to community forest agreements and associated road permits.

### 7.3 Road Permits

1. Except as provided in subsection (2) of this section, the stumpage rate for a road permit will be determined using Ministry stumpage billing records.
2. The stumpage rate for a road permit issued in conjunction with a timber sale licence entered into under sections 20, 21 and 23 of the *Act* or a licence to cut entered into under Section 47.6 of the *Act* will be the stumpage rate applicable to the cutting authority that authorizes harvesting in the cutting authority area to which the road permit provides access.
3. For the purposes of this section, a stumpage billing history record of timber harvested under a timber licence, where the timber licence area is within a tree farm licence area will be included with and be considered the stumpage billing history record of timber harvested under the tree farm licence.
4.
  - a. Where the Ministry has a stumpage billing history record of timber harvested under a licence, the stumpage rate for a road permit is the weighted average sawlog stumpage rate of cutting authorities, other than a road permit, for cutting authority areas that are located in the same forest district as the area to which the road permit applies, and that are issued under the licence that entitles the licensee to apply for the road permit.
  - b. The weighted average stumpage rate is the sum of the stumpage billed for all coniferous sawlogs during the billing period referred to in paragraph (c) of this subsection, divided by the sum of the volume of those species and grades.
  - c. The billing period referred to in paragraph (b) of this subsection for a road permit appraisal or reappraisal, with an effective date between November 1, 2004 and January 31, 2005 is the twelve month billing period ending August 31, 2004. Thereafter, the billing period will be updated annually effective February 1st and will be the twelve month period ending November 30th.
5. Where there are no stumpage billing history records from which the stumpage rate may be determined under subsection 4, and the licence that the cutting authority is issued under does not provide for an allowable annual cut or has an allowable annual cut of Crown timber equal to or greater than 5 000 m<sup>3</sup>, the stumpage rate for a road permit is the weighted average sawlog stumpage rate of:
  - a. all cutting authorities, other than road permits, that are issued under the licence that entitles the licensee to apply for the road permit, or
  - b. where there is no volume in the stumpage billing history record, all the cutting authorities **that do not provide for an allowable annual cut or have an allowable annual cut of Crown timber equal to or greater than 5 000 m<sup>3</sup>** other than road

- permits, that are for areas located in the same forest district as the area to which the road permit applies.
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 m<sup>3</sup> 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 m<sup>3</sup> 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.

#### **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 m<sup>3</sup> of Timber Volume**

1. Where a cutting authority area has less than 2 500 m<sup>3</sup> 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.