



Province of  
British Columbia

OFFICE OF THE  
MINISTER

Ministry of  
Forests



# MEMORANDUM

File: 195-30/IAPP

October 1, 1998

To: Regional Managers

From: The Honourable David Zirnhelt  
Minister of Forests

Re: *Interior Appraisal Manual*

I hereby approve Amendment No. 1 to the *Interior Appraisal Manual*, and attach a copy for your use. The following sections are amended:

Section 2.5.1 and 4.1                      Clarify the application of the least cost principle.

This amendment will come into force October 1, 1998. Further amendments or revisions to this manual require my approval.



David Zirnhelt  
Minister

Attachment

pc: Bill Howard, Director, Revenue Branch

All Subscribers, *Interior Appraisal Manual*





**FOR FURTHER INFORMATION CONTACT:**

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<b>MANUAL TITLE</b> Interior Appraisal Manual	
<b>REVISION No.</b> Amendment No. 1	<b>ISSUE DATE</b> October 1, 1998
<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
	TABLE OF CONTENTS		
REMOVE	Chapter 2	13 - 14	
INSERT	Chapter 2	13 - 14	
REMOVE	Chapter 4	1 - 4	
INSERT	Chapter 4	1 - 4	
INSERT	Transmittal Sheet & Minister's Letter		Behind Amendments Tab



**2.5.1 Method of Transportation to be Used in Determining Point of Appraisal**

The estimate of transportation costs for a cutting authority area must be determined by using the criteria for determining the transportation cost estimate as set out in this manual for the method of transportation referred in this manual to the point of appraisal that will produce the least total harvesting and transportation cost estimate unless that particular method of transportation is not permitted by the cutting authority.

In considering whether or not a particular method of transportation is not permitted by the cutting authority, the Appraisal Coordinator must not consider, nor take into account, nor have regard for:

1. Any destination referred to in the cutting authority.
2. Any enactment.
3. Any document other than the cutting authority.
4. Any other fact.

## **2.6 Calculation Conventions**

All operating cost calculations are performed to the full capacity of the calculating machine with the results truncated at four places of decimals and rounded to two places.

Results from 5 to 9 are rounded upward and from 1 to 4 are rounded downward.

After each phase cost estimate ( $\$/\text{m}^3$ ) (see Chapter 4) has been rounded to the nearest cent, it is summed with other estimates to obtain the total cost estimate.

Where values are specified as limits (constraints or requirements for equations), they are treated as absolute values and actual measurements or records are not rounded before use unless otherwise specified.

Stumpage rate calculations are performed according to the methods specified in the document entitled, *Specification: Calculating Stumpage Rates for Interior Appraisals*, approved by the Director of Revenue Branch.

# Operating Cost Estimation

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# 4

The operating cost is the sum of the trended total logging cost estimate, the trended basic silviculture cost estimate and the trended manufacturing cost estimate as detailed in this chapter. The cost estimates in this chapter are applicable to all cutting authorities unless superseded by the procedures outlined in Section 2.1.

## **4.1 Cost Estimates**

The Appraisal Coordinator must estimate harvesting and transportation costs for a cutting authority area using the information that the Appraisal Coordinator has at the time the estimate is made in a manner that will produce the least total harvesting and transportation cost estimate.

The estimate of harvesting costs must be determined by using the criteria for determining the harvesting cost estimates as set out in this manual for the method of harvesting referred to in this manual which will produce the least total harvesting and transportation cost estimate unless that particular method of harvesting is not permitted by the cutting authority.

The estimate of transportation costs must be determined by using the criteria for determining the transportation cost estimates as set out in this manual for the method of transportation referred to in this manual to the point of appraisal which will produce the least total harvesting and transportation cost estimate unless that particular method of transportation is not permitted by the cutting authority.

In considering whether or not a particular method of harvesting or transportation is not permitted by the cutting authority, the Appraisal Coordinator must not consider, nor take into account, nor have regard for:

1. Any destination referred to in the cutting authority.
2. Any enactment.
3. Any document other than the cutting authority.
4. Any other fact.

Once the least cost point of appraisal has been established, the cost estimate of manufacturing for that point, as specified in Section 4.11, is applied.

The phase cost estimating formulas and tables in this manual were derived from a survey of logging and lumber manufacturing operations in the interior. The survey includes both employee and contractor operations. The survey collects actual costs to the licensee (including wages, benefits, overtime, depreciation, fuel, supplies, repair and maintenance, moving assistance, applicable licences, insurance, etc.) from a representative sample of interior operations. Contract costs (including contractor profit and risk margins, overhead, crew transportation, etc.) are included.

The phase cost estimates are complete and reflect average conditions, operating practices, and phase accounting allocations experienced in the survey data. Additions and subtractions to phase cost estimating formulas and tables to reflect specific operating

conditions are not permitted. The cost estimates have an effective cost base date of July 1, 1996.

#### 4.1.1 Specified Operations

In addition to the logging methods and phase costs that are covered by this manual, there are specified operations which require special cost estimating. The following is a complete list of specified operations for which certain phase cost estimates are based on the information on hand rather than on the tables and formulas in this manual. Other phase cost estimates in this manual are combined with the specified operation cost estimate to determine the total operating cost. Where appropriate, specified operations are weighted according to the applicable net cruise volume.

Specified operations shall be recognised only when the treatment is required within the Silviculture Prescription, Cutting Authority Document or the Forest Development Plan as dictated by site conditions. Where a specific treatment is not required based on these conditions, the conventional cost estimate shall apply.

Further information on specified operations may be obtained from the Regional Appraisal Coordinators.

**Table 4-1 Specified Operations**

Specified Operations	Affected Phase
Salvage of small patches of timber dispersed over a large area <sup>1</sup>	Tree-to-Truck (Section 4.4)
Kinbasket Lake Barge/Ferry not used for truck haul (private)	Special Transportation Systems (Section 4.5.4)
Root Disease Control (Pushover Logging and Stump Removal) <sup>2</sup>	Silviculture (Section 4.10)
Skidder Swinging (includes all ground skidding methods)	Log Transportation (Section 4.5)

<sup>1</sup> For use with ground skidding and cable logging only when salvaging diseased or damaged timber.

<sup>2</sup> Felling of trees by pushing them over to expose the root ball for root disease control purposes. The root balls may or may not be piled and burned.

## 4.2 Appraisal Data Requirements

The cruise and all other pertinent information required for the appraisal must be submitted by the licensee with the appropriate **Interior Appraisal Data Sheet** to the District Manager.

Unless otherwise specified by the Director, Revenue Branch, cruise data must be gathered and compiled according to the approved interior close utilization specifications and in accordance with the following Ministry of Forests publications:

- Forest Service Cruising Procedures & Cruise Compilation (*Cruising Manual*),
- *Cruise Compilation User Manual*,
- *Cruise Compilation Design Manual*,
- Regional Publications - (e.g., *Operational Cruising Requirements in a Forest Region*), and
- Forest Service Policies - (e.g., *Timber Utilization Standards, Policies & Procedures for the Interior of the Province*).

In order to verify the accuracy of the cruise compilation program, the licensee must provide, on request, photocopies of the tally sheets and a magnetic copy of the data list in a format prescribed by the Regional Manager.

The net cruise volume (m<sup>3</sup>) is the gross volume (m<sup>3</sup>) less decay, waste and breakage by species. The cutting authority total net cruise volume is calculated by multiplying the net cruise volume per hectare (m<sup>3</sup>/ha) by the total merchantable timbered area (ha) to be harvested, net cruise volume is rounded to the nearest cubic meter as required in the *Cruising Specifications*.

Each reappraisal uses a cruise volume by species which is the original net cruise volume adjusted on the basis of approved amendments to the cutting authority since the last appraisal (see Section 2.3).