



MEMORANDUM

December 19, 1997

To: Regional Managers

From: The Honourable David Zirnelt
Minister of Forests

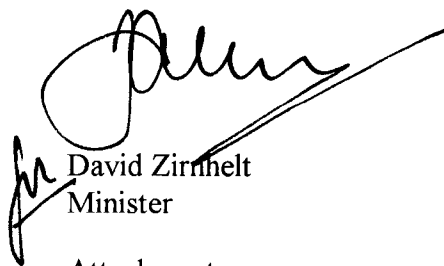
Re: *Interior Appraisal Manual*

I hereby approve Amendment No. 2 to the *Interior Appraisal Manual*, and attach a copy of it for your use.

This amendment will come into force on January 1, 1998.

The amendment implements a new policy to value hemlock pulp logs in cutting authorities that require the utilization of grade 4 hemlocks logs. The following sections are amended:

Section	Nature of Amendment
Section 2.5	Insert Point of Appraisal tables effective after January 1, 1998
Section 3.1	Add Subsection 5 that describes how mandatory Grade 4 hemlock average market values will be applied.



David Zirnelt
Minister

Attachment

cc: Bill Howard, Director
Revenue Branch

All Subscribers, *Interior Appraisal Manual*



FOR FURTHER INFORMATION CONTACT:

John Cook
Sr. Timber Pricing Forester (Interior)
Revenue Branch
Ministry of Forests
Victoria, B.C.
V8W 3E7
Phone: 356-7675
PROFS userid: J1COOK
FAX: 387-5670

MANUAL TITLE

Interior Appraisal Manual

REVISION No. 2

ISSUE DATE

January 1, 1998

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
	TABLE OF CONTENTS		
REMOVE	TOC	i - ii	
INSERT	TOC	i - ii	
REMOVE	Chapter 2	11 - 14	
INSERT	Chapter 2	11 - 14	
REMOVE	Chapter 3	3 - 4	
INSERT	Chapter 3	3 - 4	
INSERT	Parameter	-	New page, after AMV for Licences for require Utilization of Small Logs and before Interior Average Chip Prices

Table of Contents

1 Introduction

1.1 Terms of Reference.....	1-2
1.2 Area of Application.....	1-3
1.3 Cutting Authority.....	1-4
1.3.1 Cutting Authority Area.....	1-4
1.4 Responsibility for Stumpage.....	1-5
1.5 Comparative Value Timber Pricing	1-6
1.6 Stumpage Adjustments	1-8

2 Appraisal Principles and Procedures

2.1 Types of Determination.....	2-2
2.2 Time Schedule - Appraisals and Reappraisals	2-3
2.3 Reappraisal	2-5
2.4 Fixed Stumpage Rate and Extension of Term	2-9
2.5 Point of Appraisal	2-11
2.5.1 Method of Transportation to be Used in Determining Point of Appraisal.....	2-13
2.6 Calculation Conventions	2-14

3 Interior Selling Prices

3.1 Lumber Average Market Values	3-2
3.1.1 Application of Lumber Average Market Values.....	3-3
3.1.2 Lumber Average Market Value (AMV) Zones	3-3
3.2 Chip Average Market Values	3-4
3.3 Calculation of Species End Product Selling Price	3-4

4 Operating Cost Estimation

4.1 Cost Estimates.....	4-2
4.1.1 Specified Operations	4-2
4.2 Appraisal Data Requirements	4-4
4.3 Development	4-5

4.3.1 Development Cost Categories	4-6
4.3.1.1 Development Cost Allocation	4-8
4.3.2 Tabular Cost Estimates	4-11
4.3.2.1 Subgrade Construction	4-11
4.3.2.2 Subgrade Construction Variables	4-11
4.3.2.3 Subgrade Cost Estimate	4-14
4.3.2.4 Drainage Structures	4-16
4.3.2.5 Additional Stabilizing Material	4-19
4.3.2.6 Cattle Guards, Remedial Fences and Pipeline Crossings	4-21
4.3.2.7 Snow Road Reconstruction	4-21
4.3.3 Detailed Engineering Cost Estimates	4-22
4.4 Tree-to-Truck	4-26
4.4.1 Harvesting Methods	4-27
4.4.2 Tree-to-Truck Variables	4-28
4.4.3 Tree-to-Truck Cost Estimate	4-31
4.4.4 Tree-to-Truck Additive for Damaged Timber	4-35
4.4.5 Prorating Tree-to-Truck Cost Estimates	4-36
4.5 Log Transportation	4-37
4.5.1 Truck Haul Variables	4-37
4.5.2 Truck Haul Cost Estimates	4-39
4.5.2.1 Primary Haul	4-39
4.5.2.2 Secondary Haul	4-40
4.5.3 Water Transportation Cost Estimate	4-40
4.5.4 Special Transportation Systems	4-40
4.6 Road Maintenance	4-42
4.7 Road and Land Use Charges	4-46
4.8 Administration and Other Costs	4-47
4.8.1 Overhead	4-47
4.8.2 Isolated Cutting Authority Areas	4-48
4.8.3 Low Volume Additive	4-48
4.9 Post-Logging Treatment Costs	4-49
4.10 Basic Silviculture Cost Estimate	4-50
4.11 Manufacturing Cost Estimates	4-53
4.12 Cost Trend	4-56

5 Stumpage Rate Determination

5.1 Indicated Stumpage Rate	5-2
5.2 Value Index	5-3
5.3 Mean Value Index	5-4
5.4 Market Value Indexing	5-5
5.5 Base Rate	5-6
5.6 Calculation of Stumpage Rate	5-7
5.6.1 Calculation of Indicated Stumpage Rate	5-7

2.5 Point of Appraisal

The appraiser must select the point of appraisal, from the list below, which will produce the least total harvesting and delivery cost estimate for the cutting authority area. All species, qualities and sizes of timber must be appraised to a single point of appraisal. The appraiser must estimate the cost of transporting timber to the sawmill, which is nearest the point of appraisal and produces the least total harvesting and delivery cost estimate. The appraiser must then assume manufacturing costs and average market values for the zone relative to that point of appraisal.

A sawmill is defined as a conversion facility capable of producing lumber and chips, and includes the log sorting/storage areas and satellite mill yards if applicable. A sawmill does not have to be physically capable of producing lumber and chips from all the wood appraised to that site. A sawmill is considered capable of producing lumber and chips unless it has been damaged by fire or a destructive force of nature. A damaged sawmill will not be considered a location at a point of appraisal if it has not been repaired within three months of the damage. It will be reconsidered as a location at a point of appraisal on the first day of the next stumpage quarter once it is capable of producing lumber and chips again.

The logs are deemed to have reached the point of appraisal once they have entered the site, commonly the weight scale, upon which the sawmill is located. All further log handling costs except scaling (see Section 4.8) are deemed to be part of the manufacturing cost estimate.

Points of Appraisal

Northern Interior (Zone 5, 15 & 25)			
Bear Lake	Fort St. James	Mackenzie	Smithers
Burns Lake	Fraser Lake	Prince George	Strathnaver
Clear Lake	Houston	Quesnel	Upper Fraser
Engen	Isle Pierre		Vanderhoof
Skeena (Zone 6, 16 & 25)			
Terrace	Carnaby	Hazelton	Kitwanga
Southern Interior (Zone 7, 17 & 25)			
Adams Lake	Elko	Lytton	Revelstoke
Armstrong	Galloway	McBride	Slocan
Boston Bar	Grand Forks	Merritt	Squamish
Canal Flats	Kamloops	Midway	Thrms
Canoe	Kelowna	Okanagan Falls	Valemount
Castlegar	Lavington	Park Siding	Vavenby
Craigellachie	Louis Creek	Princeton	Westbank
Cranbrook	Lumby	Radium	Ymir
Creston			

Southern Cariboo (Zone 8, 18 & 25)			
100 Mile House	Chasm	Lillooet	Williams Lake
Fort Nelson - Peace (Zone 9, 19 & 25)			
Chetwynd	Fort Nelson	Fort St. John	Taylor

Points of Appraisal (for appraisals effective on or after January 1, 1998)

Northern Interior (Zone 5, 15, 25 & 35)			
Bear Lake	Fort St. James	Mackenzie	Smithers
Burns Lake	Fraser Lake	Prince George	Strathnaver
Clear Lake	Houston	Quesnel	Upper Fraser
Engen	Isle Pierre		Vanderhoof
Skeena (Zone 6, 16, 25 & 36)			
Terrace	Carnaby	Hazelton	Kitwanga
Southern Interior (Zone 7, 17, 25 & 37)			
Adams Lake	Elko	Lytton	Revelstoke
Armstrong	Galloway	McBride	Slocan
Boston Bar	Grand Forks	Merritt	Squamish
Canal Flats	Kamloops	Midway	Thrums
Canoe	Kelowna	Okanagan Falls	Valemount
Castlegar	Lavington	Park Siding	Vavenby
Craigellachie	Louis Creek	Princeton	Westbank
Cranbrook	Lumby	Radium	Ymir
Creston			
Southern Cariboo (Zone 8, 18, 25 & 38)			
100 Mile House	Chasm	Lillooet	Williams Lake
Fort Nelson - Peace (Zone 9, 19 & 25)			
Chetwynd	Fort Nelson	Fort St. John	Taylor

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

The appraiser must base his estimate of transportation costs on the method of transportation which will produce the least total harvesting and delivery cost estimate for the cutting authority area, unless that particular method of transportation is not possible under the cutting authority. In considering whether or not a particular method of transportation is possible under the cutting authority, the appraiser must not have regard for:

1. Any destination referred to in the cutting authority.
2. Any document other than the cutting authority.

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 (\$/m³) (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, Revenue Branch.

less than 0.20 m³/tree. Other similarly restricted licences may also use these AMVs at the Regional Manager's discretion. Cutting authorities meeting this criteria will use lumber AMVs listed under "AMVs for Licences which Require Utilization of Small Logs" (Zone 25) which is included in the quarterly stumpage parameters published by Revenue Branch.

The selection of AMV Zone 25 will only affect AMVs and will be made at the time of appraisal or reappraisal. Lumber recovery factors and manufacturing costs will continue to be determined by zonation based on point of appraisal.

3. Stud Lumber AMVs

Studs are defined as all lumber which is less than 10 feet (approx. 3.25 m) in length, and which has a nominal thickness and width of 2 inches x 6 inches (approximately 5 cm x 15 cm) or smaller, as produced by any lumber manufacturer. Stud AMVs are compiled for two species groups; Lodgepole Pine/Douglas-fir/Larch and Spruce/Balsam. No other species are recognized as "stud species".

4. Random Lumber AMVs

Random AMVs are compiled for all species.

5. Mandatory Grade 4 Hemlock AMVs

Mandatory grade 4 hemlock AMVs are used for cutting authorities where the optional utilization of grade code 4 is not provided by the cutting authority. Cutting authorities meeting this criteria will use lumber AMVs listed under "AMVs for Mandatory Grade 4 Hemlock Log Utilization" which are included in the quarterly stumpage parameters published by Revenue Branch.

The selection of a mandatory grade 4 hemlock AMV zone (zones 35, 36, 37 and 38) will only affect AMVs and will be made at the time of appraisal or reappraisal.

Lumber recovery factors and manufacturing costs will continue to be determined by zonation based on the point of appraisal.

3.1.1 Application of Lumber Average Market Values

Application of the Small Log, Licences which require Utilization of Small Logs, Stud and Random Lumber and Mandatory Grade 4 Hemlock AMVs in appraisals for all cutting authorities are made according to the formula in Section 3.3.

3.1.2 Lumber Average Market Value (AMV) Zones

Refer to Section 2.5 for a list of Points of Appraisal by Lumber AMV zones.

3.2 Chip Average Market Values

Monthly market value information is obtained and compiled by Revenue Branch.

3.3 Calculation of Species End Product Selling Price

The total end product selling price in \$/m³ is determined for each species using lumber recovery factors (LRF) from the cruise compilation summary, LRF update add-ons, current applicable average market values for the species and zone and species chip yield factors. Lumber and chip prices are each calculated to the nearest cent before being totalled.

Burned Timber

In the case of burned timber, the burn percent is used to reduce the selling price of the stand by assigning a zero value to the estimated chip recovery of the burned wood. This is to compensate for an increased manufacturing cost, lower lumber and chip recovery and lower lumber and chip average market values associated with processing burned timber.

$$\text{Burn Percent} = \frac{\text{BT m}^3}{\text{Total m}^3} * 100$$

where

BT m³ = volume of light, moderate and heavily fire-damaged timber
Total m³ = total volume *inclusive* of burned wood

The only other adjustment to the appraisal is for heavily fire damaged timber and is covered under Section 4.4.4 (Tree to Truck Additive for Damaged Timber).