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OCT 14 2011

To: Interior Executive Directors

From: The Honourable Steve Thomson, Minister of Forests, Lands and Natural Resource Operations

Re: Amendment No. 2 to the *Interior Appraisal Manual*

I hereby approve Amendment No. 2 to the *Interior Appraisal Manual* and attach a copy for your use. The following sections have been amended:

Section 1.1 Definitions

Additional clarity added to the definition of "scale based".

Section 2.2 Reappraisals

Changes to the definition of a reappraisal, new subsection for redundant reappraisals added for specific instances, and section reference updated.

Section 2.2.1 - Changed Circumstances

Clarification for harvest method and development changed circumstances. They now include situations where a contractor working on the licensee's behalf changes the harvest method or development.

Section 3.5.1 - Cycle Time Variables

Clarification added with respect to standard cycle time schedules developed for roads in a district. If available they shall be used.

Section 3.5.2, Table 4-3 – Points of Appraisal

Expiry date for the Clear Lake POA added.

Interior Executive Directors

Section 3.6.3 - Camps specified operation

Clarification and new eligible costs added.

Section 4.3.3.1 - Trending of Detailed Engineering Costs

Housekeeping, dates changed.

Section 5.1.1 - Upset Stumpage rates (Upset)

All upsets now no lower than VCU unless approved by the Executive Director, BCTS. New subsection for sale of decked timber on a lump sum basis. Additional housekeeping changes.

Section 5.1.2 - Indicated Upset Stumpage Rate

Housekeeping change to the formula to align with the General Appraisal System (GAS).

Section 5.1.3 - Upset Stumpage Rate

Redundant section removed.

Section 5.2 - Non BCTS Stumpage rates

Housekeeping, omitted reference to Appendix VI re-instated.

Section 6.3 - Road & Blanket Salvage Permits

Clarification that all new road and blanket salvage permits are scale based for billing.


Section 6.6, table 6.6 - Miscellaneous Stumpage Rates

New clearing rate for Cassiar TSA added.

Appendix VI, Table A6-3

Housekeeping, revised expiry dates.

This amendment will come into force on October 15, 2011. Further amendments or revisions to this manual require my approval.



Steve Thomson
Minister

Attachment

pc: Murray Stech, Director, Timber Pricing Branch



Ministry of
Forests, Lands and
Natural Resource Operations



MANUAL REVISION TRANSMITTAL

<p>FOR FURTHER INFORMATION OR IF YOU HAVE A CHANGE OF ADDRESS, PLEASE CONTACT:</p> <p>Bob Bull Senior Timber Pricing Forester (Interior) Timber Pricing Branch Ministry of Forests, Lands and Natural Resource Operations 1st Floor, 1520 Blanshard Street Victoria, BC V8W 3K1 Phone: 250 – 356-7709 Email: Bob.Bull@gov.bc.ca FAX: 250 - 387-8393</p>	MANUAL TITLE	
	Interior Appraisal Manual	
	AMENDMENT	ISSUE DATE
	Amendment No. 2	October 15, 2011
MANUAL CO-ORDINATOR		
Judy Laton Publications/Administrative Co-ordinator		
AUTHORIZATION (Name, Title)		
Murray Stech Director, Timber Pricing Branch		

Please make the following changes to your copy of the above Ministry manual.

ACTION (Remove/Insert)	(VOL.) CHAPTER-SECTION-SUBJECT	PAGE(S)	COMMENTS
	TABLE OF CONTENTS		
Remove	Table of Contents	iii - iv	After Table of Contents Tab
Insert		iii - iv	
Remove	Chapter 1	5 - 6	After Chapter 1 Tab
Insert		5 - 6	
Remove	Chapter 2	3 - 8	After Chapter 2 Tab
Insert		3 - 8	
Remove	Chapter 3	9 - 12 15 - 16	After Chapter 2 Tab
Insert		9 - 12 15 - 16	
Remove	Chapter 4	21 - 24	After Chapter 4 Tab
Insert		21 - 24	
Remove	Chapter 5	1 - 6	After Chapter 5 Tab
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Remove	Chapter 6	9 - 10 15 - 16	After Chapter 6 Tab
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“Net Merchantable Volume” means unless otherwise specified in the manual, the post reduction cruise volume compiled to the Interior Standard Merchantable Specifications in Table 1-1 of this manual;

“New Construction” means the following construction phases: subgrade construction, placement of additional stabilizing material and the construction and installation of drainage and other pertinent structures;

“Partially Harvested Timber” means timber that has been felled and/or bucked and not yet forwarded to roadside;

“Prescribed Minimum Stumpage Rate” means the minimum stumpage rate prescribed by the *Minimum Stumpage Rate Regulation* (BC Regulation 354/87);

“Timber Pricing Branch” means the Timber Pricing Branch of the Ministry;

“Reconstruction and Replacement” means replacement or structural repair of a major drainage structure (e.g., replacing stringers, cross ties, or cribbing), or major resurfacing, which means resurfacing sections of more than 0.3 km in length that were initially surfaced but have deteriorated due to long term wear and tear, where stabilizing material was not previously used, or major reconstruction, which means restoring at least 0.1 km of road (per occurrence) that requires complete rebuilding of the subgrade;

“Regional Manager” means a regional executive director of the Ministry or except for section 1.2.1(1)(a), the regional executive director’s designate;

“Regulations” means regulations under the *Act*;

“Remedial Fence and Wing Fence” means a fence that is required to remedy, reduce or manage the impact of timber harvesting activities on range management;

“Road Permit” means road permit or road timber mark;

“Salvage” except as provided in section 6.4, means a cutting authority area where greater than one-third of the net coniferous cruise volume is attacked by mountain pine beetle or other pests;

“Scale Based” means the stumpage payable is based on a scale of the timber **harvested from the cutting authority area** in accordance with part 6 of the *Act*;

“Single Unit” means a cutblock has one continuous boundary and it is not made up of two or more pieces separated by timber that is not within the gross area of the cutblock from the cruise compilation;

“Species Net Volume” is the species net volume reported in the appraisal summary report from the cruise compilation for the cutting authority area;

“Stand as a Whole (SAAW) Pricing” means that one stumpage rate is determined for all of the net merchantable timber on the cutting authority area. In a cruise based cutting

authority, the single stumpage rate applies to all of the net merchantable volume identified in the cruise conducted in accordance with the *Cruising Manual*,

“Stud Log Percent” means the net volume of 5 m logs with top diameters under 20 cm expressed as a percentage of the total net cruise volume. The stud log percent is rounded to the nearest whole percentage point;

“Stumpage Appraisal Parameter” means:

- | | |
|-----------------------------------|--|
| a. Interior Average Market Price, | d. Lumber Average Market Values, |
| b. BC Consumer Price Index, | e. Interior Basic Silviculture Costs by Species, |
| c. US Dollar Exchange rate, | f. Final Neutrality Adjustment. |

“Suitable Secondary Stand Structure Survey” means a suitable secondary stand structure survey as defined in section 1(4) of the *Forest Planning and Practices Regulation*

“Timber Harvesting” means the felling or removal of timber other than on road rights-of-way or landings on a cutblock;

“Timber Sales Manager” means the Timber Sales Manager or the Timber Sales Manager’s designate;

“Total Net Coniferous Volume” is the total of the species net volumes for all coniferous species on the cutting authority area;

“Total Net Cruise Volume” means the sum of the species net cruise volumes reported in the appraisal summary report from the cruise compilation for the cutting authority area;

“Total Net Deciduous Volume” is the total of the species net volumes for all deciduous species on the cutting authority area,

“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.

10. Regional revenue staff will notify:

- a. the licensee of the stumpage determination, or
- b. BCTS of the upset rate determination.

2.2 Reappraisals

1. Where these policies and procedures require a reappraisal to be performed, the stumpage rate must be redetermined in accordance with the relevant policies and procedures that are or were in effect as the case may be on the effective date of the reappraisal.
2. Except as provided in subsection (3) or (4) of this section or section 2.2.3 or otherwise directed by the Minister in section 2.2.2.1, a reappraisal is a complete reassessment of the cutting authority area at the time of the reappraisal by the person who determines the stumpage rate taking into account:
 - a. A revised appraisal data submission submitted by the licensee in accordance with this manual, and/or
 - b. Information available to the person who determines the stumpage rate.
3. At the time of a reappraisal, initial detailed engineering cost estimates may be re-estimated once after construction in accordance with section 4.3.3(4).
4. Where a reappraisal under sections 2.2.1.2(2) or 2.2.2 is warranted but there isn't any timber remaining on the cutting authority area to apply the redetermined stumpage rate to, then the reappraisal is redundant and not required.

2.2.1 Changed Circumstances

1. In this manual a changed circumstance means a circumstance where:
 - a.
 - i. the licensee or a contractor working on the licensee's behalf has harvested or will harvest at least 15% of the volume of timber on the cutting authority area using a harvest method that is different from the harvest method used in the most recent appraisal or reappraisal of the cutting authority area, and
 - ii. the different harvest method when taken into account in a changed circumstance reappraisal will produce the highest stumpage rate within the meaning of section 3.1.
 - b. The licensee or a contractor working on the licensee's behalf carries out or will carry out development on the cutting authority area such that there will be a difference of at least 15% between:
 - i. the total appraised development cost estimate if it is recalculated under chapter 4 on the basis of the development actually carried out, to the extent this development is in accordance with chapter 4, and
 - ii. the total appraised development cost estimate used in the most recent appraisal or reappraisal, where this difference results from circumstances

other than a change in the manual or a change as a result of a stumpage adjustment.

- c. Land containing merchantable timber has been either added to or deleted from the cutting authority area since the most recent cruise compilation or recompilation was used in an appraisal or reappraisal that exceeds the lesser of:
 - i. fifteen hectares, or
 - ii. 15% of the area of the cutting authority area as it was prior to the addition or deletion of the land.
- d. The stumpage payable on timber harvested on a cutting authority area is calculated using the information provided by a cruise of the timber before the timber is cut, and land containing merchantable timber has been added to or deleted from the cutting authority area that exceeds the lesser of:
 - i. five hectares, or
 - ii. 5% of the area of the cutting authority area as it was prior to the addition or deletion of the land.
- e.
 - i. except where timber on a cutting authority area has been damaged by a fire for which the licensee was responsible and the licensee failed to comply with the *Wildfire Act* or *Wildfire Regulations*, where timber is authorized for harvest under a cutting authority that has either a fixed stumpage rate or a stumpage rate that is adjusted quarterly and at least 15% of the volume of the timber that was considered in the appraisal of the cutting authority area authorized for harvest under that cutting authority has been suddenly and severely damaged.
 - ii. where the cutting authority area is reappraised because of sudden and severe damage the only timber that can be considered in the reappraisal is the standing timber remaining on the cutting authority area after the sudden and severe damage.
- f. A cutting permit authorizing the harvesting of timber was issued before July 1, 2010 and surrendered on or after July 1, 2010, because of the planned Interior pricing policy changes July 1, 2010, and
 - i. the volume of all of the timber in all of the cutblocks where harvesting has not started, hereinafter referred to as the remaining timber, is greater than 25% of the volume of timber that was on the cutting authority area when the cutting permit was issued, and
 - ii. the district manager is satisfied that the remaining timber or harvest method is significantly different from the timber that has been harvested

under the cutting permit.

- g. A cutting permit authorizing the harvesting of timber on the cutting authority area was issued before July 1, 2010, timber harvesting has started on the cutting authority area, and
 - i. the right to harvest timber remaining on the cutting authority area hereinafter referred to as the remaining timber has been transferred by the timber sales manager after July 1, 2010 on behalf of the licensee to whom the cutting permit had been issued, and
 - ii. the district manager is satisfied that the remaining timber or harvest method is significantly different from the timber that was harvested on the cutting authority area prior to the transfer of the right to harvest the remaining timber.
2. Except as provided in subsections 3 or 4 of this section, where a changed circumstance has occurred with respect to a cutting authority area, other than a cutting authority area that is subject of a road permit or a cutting authority area with a non-adjusting stumpage rate, the cutting authority area must be reappraised in accordance with section 2.2.1.1.
3. Where a licensee has notified the ministry in writing that a changed circumstance has occurred and the indicated stumpage rate for the cutting authority area has been less than $\$0.25/\text{m}^3$ since the cutting authority area was first appraised, and the indicated stumpage rate that would be calculated in a changed circumstance reappraisal would remain less than $\$0.25/\text{m}^3$, a changed circumstance reappraisal is not required.
4. Where a licensee has notified the ministry in writing that a changed circumstance has occurred, log transportation activities have been completed on the cutting authority area and the amount of stumpage payable as a result of a changed circumstance reappraisal under section 2.2.1.1 would be reduced, the changed circumstance reappraisal must be done only at the licensee's request.
5. Where a cutting authority is reappraised because of a changed circumstance, any bonus bid or bonus offer in existence does not change and remains in effect.

2.2.1.1 Changed Circumstance Reappraisal Procedure

1. Where the cutting authority was issued prior to August 1, 2005, the licensee must submit an appraisal data submission to the district manager immediately if a changed circumstance has occurred.
2. a. Except for a changed circumstance under section 2.2.1(1)(e), the licensee must submit an appraisal data submission to the district manager within thirty days of completion of log transportation activities or thirty days prior to the expiry of the cutting permit whichever comes first, if the cutting authority must be reappraised because of a changed circumstance under section 2.2.1.

- b. For a changed circumstance under section 2.2.1(1)(e), the licensee must submit an appraisal data submission to the district manager within thirty days of the date when the event that caused the sudden and severe damage stopped on the cutting authority area.
 - c. Thereafter the changed circumstance procedure for paragraph (a) or (b) of this section is the same as required by sections 2.1(2) to 2.1(7).
3. Where the district manager believes that a changed circumstance has occurred under subsections (1) or (2) of section 2.2.1, and the licensee fails to provide the district manager with an appraisal data submission as described in subsection (2) of this section, the district manager may initiate a changed circumstance reappraisal using information that is available to the district manager and may notify the licensee of that action. Thereafter the changed circumstance reappraisal procedure is the same procedure as that required by section 2.1(6) through 2.1(10).

2.2.1.2 Effective Date of a Changed Circumstance Reappraisal

1. Except as otherwise provided in this section, a reappraisal because of a changed circumstance is effective on the day after the effective date of the most recent appraisal or reappraisal of the cutting authority area prior to the changed circumstance reappraisal.
2. Where the cutting authority to which the reappraisal pertains was issued prior to August 1, 2005, and the date of the changed circumstance is on or after July 1, 2010, the changed circumstance reappraisal is effective on the day after the date the changed circumstance reappraisal stumpage rate is calculated.
3. Where the changed circumstance is a result of sudden and severe damage referred to in subsection 2.2.1(1)(e), the effective date of the reappraisal is the first day of the month following the date when the event that caused the sudden and severe damage stopped on the cutting authority area.
4. Where the most recent reappraisal is a reappraisal under section 2.2.3, the reappraisal shall be effective on the day after the effective date of the most recent appraisal or reappraisal of the cutting authority area that is not a reappraisal under section 2.2.3.
5. Except as provided in subsection (2) of this section, where the most recent reappraisal is a Minister's directed reappraisal under section 2.2.2 or a reappraisal under section 2.2.3, the effective date of a reappraisal under sections 2.2.1(1)(f) or 2.2.1(1)(g) is effective on the day after the date of the most recent appraisal or reappraisal of the cutting authority area that is not a reappraisal under section 2.2.2 dated July 1, 2010 or a reappraisal under section 2.2.3.

2.2.2 Minister's Direction

1. The Minister may at any time direct the determination, redetermination or variance of a stumpage rate and that,
 - a. a determined, redetermined or varied stumpage rate be effective on any future date, and that,
 - b. the determination, redetermination or variance be made in accordance with any other directions that the Minister may direct.

2.2.2.1 Minister's Direction Procedure

1. The licensee shall submit to the district manager an interior appraisal data submission, if requested by the district manager within forty-five days of the Minister's direction.
2. Thereafter, the procedure for determining, redetermining or varying a stumpage rate under section 2.2.2 shall be the same procedure as that required by subsections 2.1(3) through 2.1(7) except as may otherwise be directed by the Minister.

2.2.3 Reappraisals Due to Insect Damage

1. a. A cutting authority with an adjustable stumpage rate or a cutting authority issued under a licence entered into under section 21 of the *Act* as it was before it was repealed may be reappraised on or after April 1, 2006 only twice under this section during the term and all extensions of the cutting authority on the basis of a revised appraisal data submission if the licensee submits a revised appraisal data submission to the district manager.
- b. The revised appraisal data submission is the appraisal data submission that was used in the most recent appraisal or reappraisal of the cutting authority area prior to the revision, hereinafter referred to in this section as the original ADS, with changes permitted only to the cruise data in the original ADS in accordance with the paragraphs (c) and (d) of this subsection.
- c. The licensee may either:
 - i. update the insect attack code information from the field for each species of timber in the cruise data for codes 1, 2, 3, 5, 6, 7 and 8 as defined in the *Cruising Manual* and recompile the cruise for the cutting authority area by using the cruise data from the cruise in the original ADS for the plots in that part of the cutting authority area where timber has been harvested and combining that with the cruise data with updated insect attack codes for the plots in that part of the cutting authority area where timber has not been harvested, or
 - ii. recompile the cruise data that was in the cruise in the original ADS.

3.5 Log Transportation

The log transportation phase covers all aspects of log movement from the place of initial loading to the point of appraisal, including truck haul, rail, water and other specialized transportation. The use of section 3.5.1.1(3)(c) does not affect any other provision that requires the use of the point of appraisal, as per section 3.5.2.

3.5.1 Cycle Time Variables

3.5.1.1 Primary Cycle Time (CT):

1. The cycle consists of loading, hauling, weighing, unloading, return time, and unavoidable delays. The cycle time will normally be determined by taking into consideration all the factors that may affect it: distance, expected rate of speed, necessary delays, expected standard of roads and their maintenance, traffic density, and seasonal weather conditions.
2. **If a district has developed standard cycle time schedules from specific road junctions to the point of appraisal, the person who determines the stumpage rate must use these schedules to calculate the Primary Cycle Time, except to the extent that he or she considers variation necessary to account for sudden and significant changes in road accessibility not reflected in the existing schedules.**
3. For appraisal purposes, weighted average Primary Cycle Time (CT) is the estimated time in hours (rounded to the nearest 0.1 hour) for transporting logs from the centre of a cutting authority area to:
 - a. the point of appraisal as per section 3.5.2,
 - b. the appraisal place of unloading in the case of water or rail transport, or
 - c. where the regional manager is satisfied that a transfer of current cutting rights to address a bark beetle infestation will result in:
 - i. equal or higher sawlog stumpage rates for the timber to which the current cutting rights are transferred to, when compared to the sawlog stumpage rates for the timber where the current cutting rights are transferred from, and
 - ii. an increase in milling consumption of beetle infested timber by the licensee whose current cutting rights are transferred, then

the place that would have been the point of appraisal if the timber had been harvested in the area from which the current cutting rights are transferred from.
4. To determine weighted average primary cycle time:
 - a. establish the geographical centre point of each cutblock and project this point to the nearest road for measurement purposes,

- b. from this centre point, determine the cycle time to the nearest junction serving all cutblocks,
 - c. weight the cycle time for each cutblock by the volume on the cutblock and determine the average weighted cycle time to the junction. If the cutblock volume is not available, the cutblock area is used, and
 - d. determine the cycle time from the junction to:
 - i. the point of appraisal as per section 3.5.2,
 - ii. the appraisal place of unloading,
 - iii. if the conditions under section 3.5.1.1 (3)(c) are met, then
the place that would have been the point of appraisal if the timber had been harvested in the area from which the current cutting rights are transferred from.
5. Unavoidable delays are periods when the truck is on the job but not operating due to unpredictable delays such as; tightening binder chains, minor repairs made by driver, checking and adjusting brakes, minor delays prior to loading and unloading, refuelling, etc. Unavoidable delay time does not include any breakdown which requires shop repair, the services of a skilled mechanic, or a spilled load of logs. The time for load, unload and unavoidable delay is set at 75 minutes for cable yarding systems and 60 minutes for all other systems.
6. Total CT is the sum of the times calculated under subsections 4(c), 4(d) and 5.

3.5.1.2 Haul Method

Cost estimates do not recognize different types of logging trucks. The estimate is based upon the possible haul method, either highway or off-highway and not specifically on the licensee's particular method.

Highway hauling is assumed when loaded logging trucks must travel in part over roads administered under the *Highway Act*, without truck-to-truck transfer, to the point of appraisal, or on roads administered under the *Industrial Road Act* and Forest Service Roads as defined in *Forest Act* where prolonged known road restrictions prevent the use of oversize loads.

Off-highway hauling is assumed when loaded logging trucks can travel over roads administered under the *Industrial Road Act* and Forest Service Roads as defined in *Forest Act* to the point of appraisal, or to a recognized reload. Where prolonged known restrictions (e.g., bridge load limit, narrow road, through rock cut, Regulations under the *Workers Compensation Act*, etc.) prevent the use of oversize loads, highway haul is assumed.

3.5.1.3 Secondary Haul

Secondary haul is when logs must be truck hauled between the dewater and reload site to the appraisal point.

3.5.2 Point of Appraisal

1. The points of appraisal that may be considered for use in the appraisal are set out in Table 3-4.
2. The point of appraisal that when used in the calculation of the stumpage rate will produce the highest stumpage rate for the cutting authority area is the point of appraisal used unless:
 - a. five years have passed from the date that a milling facility was permanently rendered incapable of producing lumber and chips, and
 - b. it was the only milling facility associated with that point of appraisal.
3. Where a point of appraisal cannot be selected under subsection (2) of this section because of the conditions of paragraphs (a) and (b) of that subsection, the point of appraisal that produces the next highest stumpage rate is used.
4. The process in subsection (3) of this section is continued until a point of appraisal can be selected without being excluded by the conditions of paragraphs (2)(a) and (b).
5. Except for Table 3-3 and Appendix VI, the selling price zone in Table 3-4 for the point of appraisal selected under paragraphs (2), (3) or (4) must be used in the appraisal.

Table 3-4 Points of Appraisal

Northern Interior (Zone 5)			
Bear Lake	Fort St. James	Mackenzie	Smithers
Burns Lake	Fraser Lake	Prince George	Strathnaver
Clear Lake	Houston	Quesnel	Vanderhoof
Engen	Isle Pierre		

Skeena (Zone 6)		
Terrace	Hazelton	Kitwanga

Southern Interior (Zone 7)			
Adams Lake	Galloway	Merritt	Thrums
Armstrong	Grand Forks	Midway	Valemount
Canal Flats	Kamloops	Okanagan Falls	Vavenby
Canoe	Kelowna	Princeton	Westbank
Castlegar	Lavington	Radium	Ymir
Craigellachie	Lumby	Revelstoke	
Creston	McBride	Slocan	
Elko			

South Cariboo (Zone 8)				
100 Mile House	Chasm	Lytton	Squamish	Williams Lake

Fort Nelson - Peace (Zone 9)	
Chetwynd	Fort St. John

6. The following Points of Appraisal will expire on the dates indicated: Okanagan Falls (November 30, 2012), Kamloops (May 12, 2013), **Clear Lake (April 30, 2016)**.

2. Barge/Ferry Used for Truck Haul (Private)

When a truck haul road is interrupted by a body of water and the operation of a barge/ferry system is the most efficient means to provide a transportation link to harvesting areas, the specified operation for this phase, regardless of ownership is:

$$\text{All lakes} = 5.89/\text{m}^3$$

3. Barge/Ferry Not Used for Truck Haul (Private)

When a cutting authority can be served only by water, and daily (operating days only) ferry/barge services are feasible for crew transportation, the specified operation for this phase, regardless of ownership is:

$$\text{All lakes} = 1.29/\text{m}^3$$

3.6.3 Camp Costs

1. A camp specified operation may be included in an appraisal if **all of the criteria in this section are met for the cutting authority area being appraised.**
2. **Workers, who work on the cutting authority area, will reside in the camp and travel each day of work during timber harvesting and hauling operations from the camp to the cutting authority area.**
3. **The licensee submitting the appraisal must incur the following:**
 - i. **Costs to establish the camp either through capital expenditure or through long term lease arrangements, and**
 - ii. **Costs to operate and maintain the camp.**
4. **The camp must:**
 - a. **Be comprised of buildings or structures of a permanent or semi-permanent nature,**
 - b. **Have a cookhouse(s) and a bunkhouse(s),**
 - c. **Have full time camp staff, and**
 - c. **Be located outside of a support centre listed in Table 3-6.**
5. **A camp cost estimate may not be included in an appraisal for a cutting authority area where the workers stay in a camp that is owned or leased and operated by another licensee.**

Table 3-6 Support Centres**Northern Interior Forest Region**

Burns Lake	Kitwanga	Smithers	Terrace
Houston	New Hazelton	Stewart	Prince George
Kitimat	Fort St. James	Fraser Lake	Fort St. John
Chetwynd	Fort Nelson	Mackenzie	Dawson Creek
Vanderhoof			

Southern Interior Forest Region

Boston Bar	Kamloops	Merritt	Salmon Arm
Clearwater	Kelowna	Pemberton	Vernon
Hope	Lillooet	Penticton	Nakusp
Canal Flats	Creston	Grand Forks	Nelson
Castlegar	Fernie	Greenwood	Revelstoke
Cranbrook	Golden	Invermere	100 Mile House
McBride	Valemount	Princeton	Quesnel
Williams Lake			

6. Where a cutting authority area serviced by a camp may be accessed only by rail, the camp specified operation is \$4.50/m³, otherwise the specified operation is \$2.40/m³ for all other types of access.

3.6.4 Skyline and Intermediate Support Skyline

Skyline yarding estimates will be recognized for each block where the average yarding distance is greater than 300 m, or intermediate supports are required.

The average yarding distance is determined by:

1. Drawing a series of transects (minimum four) with their origin at a landing, being equi-angle apart and measured to the back-line. This is done for each block; blocks will not be amalgamated for the purpose of average yarding distance calculation. The volume for the system is the sum of the volumes of qualifying blocks.
2. Yarding distance will be measured as slope distance from the centre of the landing to the falling boundary.
3. The sum of transect lengths divided by the number of transects equals the average yarding distance.
4. The exception to the above; where the ministry and the licensee agree that Forest and Land Management is better served by the use of a skyline system in a particular logging chance, then the average yarding distance greater than 300 meters requirement is waived.

10. Costs that may be included in the detailed engineered cost estimate are:
- a. Freight (for materials).
 - b. Provincial sales tax if applicable (for materials purchased prior to July 1, 2010).
 - c. Supervision of construction of complex structures by a professional engineer.
 - d. Bridge Costs
 - i. In addition to other costs described in this section, bridge costs may include:
 - Crib back fills to a maximum distance of 15 m on either end.
 - Site preparation.
 - Protection features such as rip rap.
 - Material and equipment supply and delivery (subject to paragraphs (ii) and (iii) in this subsection).
 - Bridge certification by a professional engineer either employed by the licensee or contracted. A maximum of three field visits are permitted unless otherwise approved by the regional timber pricing co-ordinator.
 - ii. Where bridge materials are re-used by the original purchaser at a different site, the bridge cost estimate may include the cost of dismantling the materials at the site where they were previously used, and transportation to and installation at the different site, but may not include the initial materials and delivery costs.
 - iii. Where used bridge materials are purchased by the licensee from a legally non-associated party, only the cost of purchasing and transporting those materials approved by the person determining the stumpage rate may be included in the bridge cost estimate in addition to the costs listed above.
 - e. Site plans, designs and layouts.
 - f. Where equipment is not, or will not be already on site for adjoining tabular road, bridge or culvert construction, then the costs of mob and demob may be included in the engineered cost estimate.
11. GST/HST and supervision costs other than as stated above, are not to be included in the engineered estimate.
12. Where different timber volumes are used for separate cost estimates, the unit costs are rounded to the nearest cent before totalling.

4.3.3.1 Trending of Detailed Engineering Costs

1. All detailed engineering costs must be adjusted to match the cost base of the manual in effect at the time of the appraisal or reappraisal (refer to Table 4-3). This includes development costs in apportionment agreements, ministry approved competitive bid tenders, and ECE's prepared using Appendix I.
2. ECE Cost Year means:
 - a. For ECEs (or portion(s) thereof) which are calculated using this manual, the ECE Cost Year is **2009**.
 - b. For ECEs (or portions(s) thereof) which are calculated using tenders, materials costs, design and survey costs, etc. the year the costs are based on or incurred is the ECE Cost Year.
 - c. Where all components of an ECE have a common ECE Cost Year, the trend factor can be directly determined from Table 4-3.
 - d. For new or re-estimated (section 2.2(3)) ECEs where components of an ECE have different ECE Cost Years, it is necessary to trend all components to the Cost Base Year of the manual in effect at the time (based on the effective date of the cutting authority). The Cost Base Year then becomes the ECE Cost Year for future trending.

Table 4-3 Trend Factors for ECE Costs

ECE Cost Year	Multiply by this Trend Factor to Match the 2009 Cost Base
1995	0.925
1996	0.872
1997	0.811
1998	0.856
1999	0.899
2000	0.879
2001	0.894
2002	0.904
2003	0.978
2004	0.978
2005	1.0
2006	1.0
2007	1.0
2008	1.0
2009	1.0
2010	1.0
2011	1.0

4.4 Road Management

Where the licensee is obliged to carry out road management, activities, the road management cost estimate includes but is not limited to, costs for the following:

- grading
- snowplowing and refreezing
- sanding
- spot gravelling (< 0.3 km distance)
- culvert repairs and thawing
- culvert removal
- culvert replacement
- non-structural maintenance of bridges
- bridge re-decking/wearing surface replacement
- ditching
- cattle guard cleanout
- road use charges paid to other licensees
- all access management
- seasonal erosion control
- roadside treatments
- sign maintenance
- dust control
- brushing
- minor flood and storm damage repair
- slough removal
- water bar construction (seasonal)
- road ripping
- cross ditch construction
- grass seeding
- all deactivation

The cost estimate for all road management carried out on logging operations depends on the geographic location of the cutting authority area (refer to Table 4-4).

Cutting authorities issued under forms of tenure not located administratively within a tree farm licence area or timber supply area will be assigned the road management cost estimate for the TFL or TSA/supply block in which the cutting authority is geographically located.

Stumpage Rate Determination

5

5.1 Stumpage Rate Determination for a Cutting Authority Entered into Under a BCTS Licence

1. Sections 5.1.1 through 5.1.3 are the policies and procedures for determining a stumpage rate for a cutting authority that is entered into under a BCTS licence.
2.
 - a. The Market Pricing System for BCTS can only be used in the appraisal of a BCTS licence and a forestry licence to cut entered into under Section 47.6(3) of the *Act* where data is available to do a full appraisal.
 - b. Where the data is not available to do a full appraisal of a cutting authority area, the appraisal must use the procedures outlined in chapter 6 of this manual.
3.
 - a. All 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 and all extensions except where:
 - i. a reappraisal is done under section 2.2.1(1)(e) due to sudden and severe damage, or
 - ii. a Minister's directed reappraisal is done under section 2.2.2,

5.1.1 Upset Stumpage Rates (Upset)

1. Except as provided by subsections (2), (3), (4), (5) and (6) of this section, the **upset** for a timber sale licence shall be no less than the **greater of either the indicated upset stumpage rate (IUSR) calculated according to section 5.1.2, or the variable cost to prepare the timber for sale (VCU)** as requested by the Timber Sales Manager.
2. Where applications for a timber sale licence with an upset determined under subsections (1) **or (5)** of this section have been invited but no applications have been received, the upset for the re-advertised timber sale shall be **no less than the VCU BCTS when that rate is requested by the Timber Sales Manager.**
3. Where the Executive Director, BCTS, does not anticipate that applications for a timber sale licence with an upset determined under subsections (1) **or (5)** of this section will be received due to market conditions or timber profile, the upset shall be **equal to the upset approved by the Executive Director, when that rate is requested by the Timber Sales Manager.**
4.
 - a. The upset for decked timber or partially harvested timber that is over three years old and is administered by BCTS, shall be the prescribed minimum stumpage rate when requested by the Timber Sales Manager.
 - b. The upset for decked timber or partially harvested timber that has been decked or felled for three years or less and is administered by BCTS shall be

the upset requested by the Timber Sales Manager.

- c. If the timber sales manager intends to sell the decked timber competitively as a lump sum amount then the upset is the upset from the appropriate paragraph (a) or (b) of this subsection multiplied by the volume determined by an authorized licenced scaler using a method approved by the minister.
5. Except as provided in subsections 2 or 3 of this section, the upset for a timber sale licence where the volume of deciduous timber to be harvested on the cutting authority area is equal to or greater than sixty percent of the total net cruise volume, shall be determined in accordance with section 5.1.2 except that the market price determined under section 3.4 shall use $CD = 1$.
6. Where the invitation to tender for timber authorized for harvest under a timber sale requires a bonus offer, and the amount of stumpage payable will be based on a cruise of the timber as authorized under section 106 of the *Forest Act*, the upset shall be no less than the greater of:
 - a. the upset stumpage value derived using subsection (1) of this section, or
 - b. the VCU, when that rate is requested by the Timber Sales Manager.
7. The VCU is calculated by the Timber Sales Manager.
8. The upset determined under subsections (1), (2), (3), (4)(b), (5) and (6) of this section shall not be less than the VCU unless approved by the Executive Director, BCTS and that rate is requested by the Timber Sales Manager.

5.1.2 IUSR Calculation

$$\text{IUSR} = \text{FEWB} \times (1 - \text{DF})$$

Where:

- IUSR = Indicated upset stumpage rate
- FEWB = Final estimated winning bid from section 3.7
- SO = Specified operations as defined in section 3.6
- DF = 0.00 if the cutting authority being appraised was entered into under section 47.6(3) of the *Act*, otherwise DF = 0.30

5.1.3 Total Stumpage Rate

1. The stumpage rate is the total of the upset stumpage rate plus the bonus bid or the upset stumpage value plus the bonus offer, if any, that must be paid by the licensee.
2. Where the upset stumpage rate is determined under subsections (1), (2), (3), and (4) of section 5.1.1, the total stumpage rate applies to Grade Code 1 and 2 coniferous sawlogs.
3. Where the upset stumpage rate is determined under subsection (5) of section 5.1.1, the total stumpage rate applies to Grade Code 1 and 2 coniferous and deciduous sawlogs.
4. Where the upset stumpage value is determined under section 5.1.1(6) the upset stumpage value applies to the timber species and volumes specified by the Executive Director, BCTS.

5.2 Stumpage Rate Determination for a Cutting Authority Other than a Cutting Authority Entered into Under a BCTS Licence, or a Cutting Authority for Which a Stumpage Rate is Determined Under Chapter 6

Except as provided in Appendix VI, sections 5.2.1 through 5.2.5 are the policies and procedures for determining a stumpage rate for a cutting authority other than a cutting authority entered into under a BCTS licence or a cutting authority for which a stumpage rate is determined under chapter 6.

5.2.1 Indicated Rate (IR)

1. The IR is the difference between the final estimated winning bid (FEWB) calculated for the cutting authority under section 3.7 and the tenure obligation adjustment (TOA) calculated under section 4.9.
2. Expressed as an equation:

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

5.2.2 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.

5.2.3 Stumpage Rate

1. Unless otherwise provided in subsection 2 of this section, the stumpage rate is the total of the reserve stumpage rate plus any administration and silviculture levies which may be charged under section 5.2.4.
2. If the cutting authority was awarded on the basis of competition, the stumpage rate is:
 - a. the total of the reserve stumpage rate and the bonus bid, or
 - b. the total of the reserve stumpage value and the bonus offer.

5.2.4 Levies

1. A silviculture levy may be added to:
 - a. the reserve stumpage rate determined under section 5.2.2,
 - b. the stumpage rate determined under subsections 6.1.3, 6.2(1), 6.2(2) or section 6.5,
 - c. the reserve stumpage rate indicated in Table 6-6 for all species grades 4 and 6 and deciduous sawlogs.
2. The levy is equal to the district manager's or timber sales manager's cost estimate of silviculture costs to be incurred by the Crown.
3. Development/Administration Levy:
 - a. A development levy may be added to the reserve stumpage rate. The development levy is equal to the appraisal cost estimate of road construction provided by the Crown as approved by the regional manager.
 - b. 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.
4. The amount of any levy may be re-determined at reappraisal only.

District is Smallest Geographic Unit			
TSA	Rate (\$/m³)	District	Rate (\$/m³)
Kamloops	7.39	Kamloops Forest District	6.81
		Headwaters Forest District	7.31
Williams Lake	3.38	Central Cariboo Forest District	3.65
		Chilcotin Forest District	0.31
Prince George	7.15	Fort St. James Forest District	7.95
		Prince George Forest District	7.45
		Vanderhoof Forest District	5.88

District & TSA are the same	
District/TSA	Rate (\$/m³)
100 Mile House	5.11
Kootenay Lake	5.94
Fort Nelson *	5.60
Mackenzie	5.35
Okanagan Shuswap	8.20
Quesnel	2.28

* Regional rate

Regions	
Regions	Rate (\$/m³)
RNI	5.60
RSI	6.54

4. If there are no records from which the weighted average sawlog stumpage rate may be determined under paragraphs (a) or (b) of subsection (2) of this section, then the stumpage rate, for each species of coniferous timber, is the rate in Table 6-1 for the forest zone in which the road or blanket salvage permit cutting authority area is located.
5. The stumpage rate for a road permit granted to the holder of a timber sale licence entered into under section 20 of the *Act* will be the same as the stumpage rate for the timber sale licence which entitled the licensee to apply for the road permit.
6. The stumpage rate for a road permit for a licence other than a BCTS licence shall be redetermined on June 1 of each year in accordance with the procedure in this section.
7. The costs of roads authorized for construction under road permits are eligible for inclusion as development cost estimates under section 4.3 in the appraisal of the licensees' first fully appraised tributary cutting authority. These roads will not be considered as existing roads under section 4.3.1.3(2).

8. Where a woodlot has an eligible extended road amortization agreement before December 1, 2008 the sawlog stumpage rate for a road permit with an effective date on or after December 1, 2008 is calculated using the procedures in this section.
9. The stumpage rate for a blanket salvage cutting permit shall be redetermined on June 1 each year in accordance with the procedures in this section.
10. **All new Road and Blanket Salvage Permits must be scale based for billing.**

6.6 Miscellaneous Stumpage Rates

1. Unless otherwise specified in this manual, the stumpage rates, at the time of scale for timber harvested for the purposes described, in the districts listed, in the forest district specific section of Table 6-6 are as prescribed in that table. This table does not apply to cruise based cutting authorities.

Table 6-6 Miscellaneous Stumpage Rates

All Interior Forest Regions

Species	Code ¹	Product	Reserve Stumpage Rate
All Species	SB	Shake & Shingle Bolts, Blocks and Blanks.	\$5.30/m ³
All Species	SK	Shakes	\$6.00/m ³
Cedar	PR	Posts & Rails (Split and Round)	\$3.00/m ³
All other Species	PR	Posts & Rails (Split and Round)	\$1.20/m ³
All Species	MT	Mining Timbers	\$3.00/m ³
All Species	FW	Firewood	\$0.50/m ³
Yew		All	\$0.25/m ³
All Species	CH	Wood chips from post-harvest material where a waste assessment has been made ²	\$0.25/m ³
All Species	HF	Hogged tree material from post-harvest material where a waste assessment has been made ²	\$0.25/m ³
All Species		Grades 4 and 6, except where the upset stumpage rate is determined under section 6.2.1(1)(a) and (b) and 5.1.1(5)	\$0.25/m ³
Deciduous Species		All, except grades 4 and 6 and except where the upset stumpage rate is calculated under section 6.2.1(1)(a) and (b) and 5.1.1(5)	\$0.50/m ³
All Species	SS	Stakes & Sticks.	\$1.20/m ³
All Species	XM	Christmas Tree: under 3m 3-5 m over 5 m	\$0.20/each \$1.00/each \$1.50/each
All Species		Logs salvaged below the high water levels of Reservoir Lakes and the Slocan, Kootenay, Mineral, Babine and Ootsa Lakes	\$0.25/m ³
All Species		Marine Beachcomb	\$0.70/m ³
All Coniferous		For logs harvested from the following Research Forests: Alex Fraser (UBC), Aleza Lake (UBC and UNBC), College of New Caledonia (CNC), and Fort St. James (UNBC)	\$0.25/m ³
All Species		Firmwood Reject	NIL

¹ Special Forest Product as identified in section 94(3) of the *Act* and described in the *Scaling Manual*.

² Where the post harvest material is removed under a different tenure from the original cruise based cutting authority, a waste assessment is not required.

District/TSA Specific

Description of Activity	Forest District/TSA	Reserve Stumpage Rate
New Crown land area disturbed for mining exploration trails, seismic lines ¹ , gas or oil well sites and right-of-way to well sites ² , or, authorizations for investigative purposes issued under the <i>Land Act</i> .	Rocky Mountain Peace Ft. Nelson Mackenzie Cassiar	\$1,881/ha \$849/ha \$836/ha \$460/ha \$948/ha

¹ The corresponding district reserve stumpage rate from the above table is adjusted according to the category of line clearing as follows:

- Category 1 - no adjustment
- Category 2 - 1/2 of the reserve stumpage rate
- Category 3 - 1/3 of the reserve stumpage rate

The gross area for each category reported as new line on either; the Oil and Gas Commission's Geophysical Final Plan cover sheet or an As Cleared Plan is multiplied by the reserve stumpage rate as adjusted above (refer to Appendix V for category definitions).

² For pipe line rights-of-way a stumpage rate must be determined by using the above rates for cutting authorities containing 2 000 m³ or less, of merchantable coniferous volume. For pipe line rights-of-way cutting authorities greater than 2 000 m³ see section 6.7.

Table A6–2 Zonal Tabular Adjustment Table

Scale Based											
Zone	BA	CE	FI	HE	LA	SP	WH	YE	GP ¹	DP ²	Average
SW ³	-18.85	-17.12	-17.12	-17.12	-17.12	-17.83	-17.12	-17.12	-17.15	-16.30	-17.12
5	0.42	-18.42	-13.12	-7.54	-1.43	-3.00	-1.43	-1.43	1.13	-0.87	-1.43
6	-0.57	-0.70	-1.77	-2.52	-1.77	-1.66	-1.77	-1.77	-0.73	-1.77	-1.77
70K	7.81	-5.40	-7.31	-3.39	-5.36	6.21	-5.11	-3.75	3.77	4.75	1.78
7SE	6.87	-5.47	-10.21	-5.34	-6.10	3.45	-7.45	-12.33	-2.03	0.32	-2.35
8	-3.10	-7.05	-15.97	-6.98	-4.14	-3.60	-16.26	-4.14	-0.14	-1.23	-4.14
9	10.19	3.63	3.63	3.63	3.63	2.93	3.63	3.63	3.05	5.00	3.63

Cruise Based											
Zone	BA	CE	FI	HE	LA	SP	WH	YE	GP	DP	Average
SW ³	-17.03	-18.85	-17.09	-18.85	-18.85	-18.66	-18.85	-18.85	-17.73	-19.24	-18.85
5	-2.38	-4.39	-5.20	-4.39	-4.39	-2.95	-4.39	-4.39	-4.17	-5.01	-4.39
6	-2.38	-4.39	-5.20	-4.39	-4.39	-2.95	-4.39	-4.39	-4.17	-5.01	-4.39
70K	5.25	-3.66	0.56	2.91	2.91	4.17	-2.30	2.91	2.68	2.53	2.91
7SE	4.85	1.56	1.39	4.30	4.30	5.28	4.30	4.30	3.82	4.25	4.30
8	-1.41	-3.51	-4.03	-3.93	-3.93	-2.80	-3.93	-3.93	-3.89	-4.21	-3.93
9	7.69	7.30	7.30	7.30	7.30	7.78	7.30	7.30	6.87	7.34	7.30

¹ GP (green pine) is all appraised Lodgepole pine volume except Lodgepole pine red and grey attack

² DP (dead pine) is appraised Lodgepole pine red and grey attack volume

³ SW (smallwood) is the previous Zone 25 and applies to only those cutting permits under the licences listed in Table A6-3 where the cutting permit and the licence restricts harvesting to stands where the net merchantable volume per tree is less than 0.2m³/tree and the licence has not expired.

Table A6-3 Smallwood Licence Table

Licence	Licence Expiry Date¹
A55524	2011-12-31
A55525	2012-05-31
A55527	2012-05-31
A55528	2011-12-31
A55529	2012-05-31
A55578	
A61108	2012-08-30
A61109	2012-06-30
A65442	2011-10-31
A73171	
A77509	
A80600	
A81242	2011-12-06
A81700	2011-12-05
A82224	2012-06-06
A82520	
A82523	
A84161	
A84685	
A85417	
A85446	
A85448	
A85452	
A86036	
PA16	

¹ Expiry date listed if before July 1, 2012

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