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October 31, 2018

To: Interior Executive Directors

From: Honourable Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development

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

The following sections have been amended:

The regular semi-annual updates of tabular rates (tables 6-1, 6-2, 6-4 and 6-5). These updates only apply to new woodlot, community forest, blanket salvage or licence-to-cut cutting authorities issued on or after the update date.

This amendment will provide licensees the flexibility to combine blocks with different costs and prorate the cost estimates at the block level. This change applies to the Camp variable in the estimated winning bid formula, the water/special transportation specified operations and the uneven aged forest management operations.

Silviculture and soil moisture regime estimates have been updated.

A number of housekeeping amendments have been made to update references.

This amendment will come into force on November 1, 2018. Copies of the amendment and the amended IAM are available at the following link:

<http://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/interior-timber-pricing/interior-appraisal-manual>

Further amendments or revisions to this manual require my approval.

Doug Donaldson  
Minister

pc Chris Stagg, Assistant Deputy Minister, Timber Operations, Pricing and First Nations  
Vera Sit, Executive Director, Timber Operations, Pricing and First Nations  
Allan Bennett, Director, Timber Pricing Branch  
Len Marsh, Director, Pricing and Tenures, Regional Operations Division - South Area  
Darius Low, Revenue Team Lead, Regional Operations Division - North Area



# TIMBER PRICING BRANCH

## Interior Appraisal Manual

Effective July 1, 2018

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Cost Base of: 2016

### Includes Amendments

Amendment No. 1

Amendment No. 2

### Effective Date

August 15, 2018

November 1, 2018



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3. The volume that is manufactured to Canadian Lumber Standard/American Lumber Standards (CLS/ALS) is in foot board measure (fbm). Volume that is manufactured to non-CLS/ALS sizes are adjusted to equivalent CLS/ALS sizes.
4. If there is insufficient data reported, the lumber AMV for a species or species group may be determined using an alternate procedure approved by the director.

### **1.2.3 Minimum Stumpage Rate**

1. A stumpage rate or an upset determined using this manual must not be less than the prescribed minimum stumpage rate.

### **1.2.4 Numbering and Calculation**

1. The following exemplifies the numbering system used in this manual:
  1. = Chapter
  - 1.1 or 1.1.1 = Section
  - 1.1.1(2) = Section with subsection
  - 1.1.1(2)(a) = Section with subsection and paragraph
  - Table 4-2 = Table 2 within chapter 4
2. Unless otherwise specified in this manual, where a value is specified as a limit, for example a constraint or a requirement for an equation,
  - a. The value will be treated as an absolute value, and
  - b. An actual measurement or record will not be rounded before use.
3. Each calculation of a tenure obligation adjustment or specified operation expressed in dollars per cubic metre will be rounded to the nearest cent.

### 1.3 Point of Appraisal (POA)

1. The POA used in an appraisal is the POA for the appraised Transportation Route determined under section 1.4.4.
2. The POAs that may be considered for use in the appraisal are set out in Table 1-1 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 POA, or
  - c. The appraisal effective date is past the expiry date for that POA indicated in subsection (3) of this section.

For the purposes of subsection (1)(a), permanently rendered incapable means the equipment required to produce lumber and chips has either been destroyed or permanently removed from the site, or has not been in use for a period of five years or more.

3. The following Point of Appraisal will expire on the date indicated; **(none at this time)**.
4. The selling price zone **used in an appraisal is the Zone** indicated in Table 1-1 for the point of appraisal; with the exception of determining the Conifer Zonal Volume (as provided in Table 3-2).

**Table 1-1: Points of Appraisal**

| Zone 5<br>(Northern Interior)   | Zone 6<br>(Skeena) | Zone 7<br>(Southern Interior)   |  | Zone 8<br>(South Cariboo)                            | Zone 9<br>(Fort Nelson-Peace) |
|---|--------------------|---|--|--|-------------------------------|
| Bear Lake<br>Burns Lake<br>Engen<br>Fort St. James<br>Fraser Lake<br>Houston<br>Isle Pierre<br>Mackenzie<br>Prince George<br>Quesnel<br>Smithers<br>Strathnaver<br>Vanderhoof | Terrace            | Adams Lake<br>Armstrong<br>Canal Flats<br>Castlegar<br>Craigellachie<br>Creston<br>Elko<br>Galloway<br>Grand Forks<br>Kelowna<br>Lavington<br>Merritt | Midway<br>Princeton<br>Radium<br>Revelstoke<br>Thrums<br>Vavenby<br>Westbank<br>Ymir | 100 Mile House<br>Chasm<br>Squamish<br>Williams Lake | Fort St. John<br>Chetwynd     |

## 1.4 Fully Appraised Cutting Authority Area

### 1.4.1 Cutblocks

1. Each cutblock in a cutting authority must be
  - a. a single unit; and
  - b. contained entirely within the geographic boundary of a forest district.

### 1.4.2 Maximum Area

1. A cutting authority area must be within a polygon smaller than 7,850 hectares formed by straight lines around the furthest boundaries of the furthest cutblocks (see example in Figure 1); excluding the area of the polygon not in the Timber Harvesting Land Base (THLB).

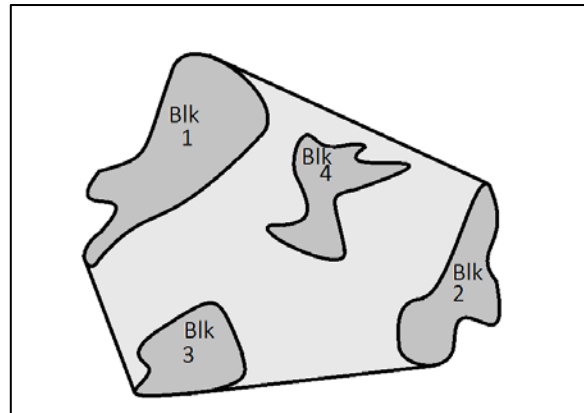


Figure 1: Example of polygon enclosing four blocks in a cutting authority.

### 1.4.3 Cruise Based/Scale Based

1. A cutting authority must be made up of cutblock(s) where
  - a. each cutblock has 35% or more red and grey MPB attacked Lodgepole pine<sup>1</sup>; or
  - b. each cutblock has less than 35% red and grey MPB attacked Lodgepole pine<sup>1</sup>.

### 1.4.4 Transportation Route

1. A cutting authority must be made up of cutblock(s) where the transportation route of each cutblock is to a common POA.
2. The collection of transportation routes in (1) cannot include more than one type of water transportation system.
3. For cutblocks located in an area with water transportation systems available, the transportation route in subsection (1) means the route with the lowest transportation

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<sup>1</sup> Net Merchantable Volume as indicated in the appraisal summary report from the cruise compilation.

cost (TC) by cutblock, using the appraisal log dump with the shortest cycle time from the cutblock, and using the following equation:

$$TC = [1.480 * (CYCLE + (0.5 * CYCLE\_INC6)) * CPIF] + [SOs * (CPI/ACPI)]$$

Where

CYCLE = as defined in section 3.2.13 (3)(a) through (d) and (4) accordingly.

CYCLE\_INC6 = CYCLE (calculated above) – 6.0 hours. If < 0, then 0.

SOs = the sum of the water transportation system specified operations costs from section 3.3.1 (surface tow system or log barge system as indicated by the appraisal log dump location in Appendix VI) that apply to the route.

CPI = as defined in section 3.2.1

ACPI = as defined in section 3.4

CPIF = as defined in section 3.2.1

4. For cutting authorities other than those in subsection (2), the transportation route in subsection (1) means the route with the shortest cycle time (excluding barge delays) calculated using the procedure in subsection 3.2.13(3)(a) through (c).
5. A transportation route must be:
  - a. a route suitable for the transportation of logs at the time of the submission of the original appraisal in ECAS; or
  - b. a route that will become suitable with development projects (including amortized development) submitted in the appraisal and meet the provisions in this manual.

#### 1.4.4.1 Unsuitable Transportation Route

1. The district manager may deem a transportation route unsuitable if satisfied that one or more of the following conditions would prevent the use of the transportation route.
  - a. In the case of a road section or bridge,
    - i. the road section or bridge has become impassable to logging trucks and the condition of impassability is unrelated to lack of use or maintenance of roads under road permit obligations of any licensee, and is expected to persist for at least one year; or



## 2.2 Reappraisals

1. This section applies to fully appraised cutting authorities effective on or after April 1, 2017 (for fully appraised cutting authorities effective prior to this date use section 2.2 as it was prior to April 1, 2017).
2. Where the policies and procedures in this manual require a reappraisal, the stumpage rate must be determined in accordance with the policies and procedures that are or were in effect as the case may be on the effective date of the reappraisal.
3. A reappraisal is a complete reassessment of the cutting authority on the effective date of the reappraisal, with the exception of a reappraisal directed by the Minister (section 2.2.4), an insect damage reappraisal (section 2.2.5), or a compilation version reappraisal (section 2.2.6).
4. A reappraisal may not be used to change the appraisal from a full appraisal to a tabular stumpage rate (chapter 6) or vice versa.
5. If a cutting authority is reappraised, any bonus bid or bonus offer in existence does not change and remains in effect.

### 2.2.1 Reappraisal Data Submissions

1. If a reappraisal is required, a licensee representative must submit an ADS to the district manager, and the appraisal data submission process (section 2.1.1 (b) to (g)) must be followed.
2. A changed circumstances reappraisal must only be submitted after the completion of primary harvesting activities.

### 2.2.2 Changed Circumstances

1. This section applies to all fully appraised adjustable rate cutting authorities.
2. A changed circumstance means a circumstance where:
  - a. the operations used or carried out on a cutting authority area are different from what was identified in the original appraisal. These changes in operations include:
    - i. a change in **Point of Appraisal** due to a shorter transportation route (or in the case of section 1.4.4 (2) a lower cost transportation route) becoming available with development projects submitted in another appraisal data submission by the same licensee, prior to the completion of primary harvesting activities; or
    - ii. a change in **harvest method(s)** that exceeds the greater of 1000 m<sup>3</sup> or 10% of the total net cruise volume. If the change is to a higher cost harvest method, the licensee submitter must include a rationale to explain why the change is required; or

- iii. a change in **development** that exceeds the greater of \$5,000 or 3% of the total development cost estimate in the original appraisal recalculated under chapter 4, on the basis of the development work actually carried out, to the extent this development is in accordance with chapter 4; or
  - aa. a licensee representative may choose to submit a changed circumstance reappraisal in paragraph (iii) to re-estimate only the development costs in the original appraisal if it does not meet the minimum change requirement; or
- iv. a change in the **special transportation** specified operation; or
- v. a change in the **root disease** control treatment area that exceeds the greater of 3 hectares or 3% of the total treatment area, or
- vi. a change in the **skyline harvest area** that exceeds the greater of 3 hectares or 3% of the total skyline harvest area; or
- vii. a change in the appraised **water transportation route** because a change in the water level rendered a log dump unfeasible; or
- viii. a change in the appraised **enhanced silviculture** treatment area; or
- ix. a change where **camp** was indicated in the original appraisal data submission and did not meet the criteria in section 3.2.30, or vice-versa; or
- x. a change in the **uneven-aged forest management** specified operation; or
- b. the cutting authority harvest area is different from what was used in the original appraisal. These changes include:
  - i. an absolute<sup>1</sup> change in **harvest area** that exceeds the greater of 5 hectares or 5% from an original appraisal for a **scale based** cutting authority; or
  - ii. an absolute<sup>1</sup> change in **harvest area** that exceeds 3 hectares from an original appraisal for a **cruise based** cutting authority.

Note: for cruise based billing purposes in subsection (2)(b)(ii) the harvest area must only be changed to reflect the new harvest area when the harvest area has decreased and the cutting authority has been amended, or the harvest area has increased.

- iii. Notwithstanding subsection 2.2 (1) and (2), any cutting authority amended for a Timber Damaging Event may include non-tributary development project costs in a reappraisal if construction of the projects started prior to the event, and they were projects included in the original appraisal.

A Timber Damaging Event is defined as an event where trees are damaged as a result of a major wind or ice (>20 ha), wildfire or landslide.

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<sup>1</sup>Measured as the absolute change, e.g. an addition of 5 hectares and the subtraction of 5 different hectares is a 10-hectare change for the purposes of this section.

### 3.2.8 Average Conifer Volume (VOL)

1. VOL for BCTS cutting authorities is the Total Net Coniferous Volume.
2. VOL for a Small Volume Tenure Cutting Authority is the greater of the sum of all AACs for all the licenses (including lump sum tenures) that the licensee has in the same TSA (as the cutting authority being appraised) or the Total Net Coniferous Volume.

A Small Volume Tenure Cutting Authority means a cutting authority where the sum of all AACs for all the licenses (including lump sum tenures) that the licensee has in the same TSA (as the cutting authority being appraised) is less than the zonal volume in Table 3-2 (for the selling price zone in which the cutting authority is located).

3. VOL for Major Tenure Cutting Authorities is the volume in Table 3-2 (for the selling price zone in which the cutting authority is located).

A Major Tenure Cutting Authority means a cutting authority that does not meet the criteria in subsections (1) or (2).

**Table 3-2: Zonal Volume<sup>1</sup>**

| Zone | Total Net Coniferous Volume (m <sup>3</sup> ) |
|------|---|
| 5    | 50,762  |
| 6    | 48,932  |
| 7 OK | 35,562  |
| 7 SE | 41,344  |
| 8    | 37,492  |
| 9    | 35,938  |

### 3.2.9 Conifer Decay (DECAY)

1. DECAY is the prorated coniferous species decay % (from the appraisal summary report)/100.

### 3.2.10 Fire Damage (FIRE)

1. FIRE is the prorated coniferous species fire % (from the appraisal summary report)/100.

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<sup>1</sup> For the purposes of applying the volume variable in the estimated winning bid equation, first determine the applicable selling price zone for the cutting authority area from Table 1-1. Then if the SP zone is zone 7, use the descriptions below to pick the appropriate zonal volume from Table 3-2 based on which district the cutting authority area is located in.

7OK = Cascades, Okanagan Shuswap, 100 Mile House, and Thompson Rivers Districts excluding Kamloops TSA Block A.

7SE = Prince George, Rocky Mountain and Selkirk Districts plus Kamloops TSA Block A

### 3.2.11 Volume per Tree (VPT)

1. VPT is the cutting authority average net volume per tree (all species - from appraisal summary report).

### 3.2.12 Conifer Volume Per Hectare (VPH\_CON)

1. VPH\_CON is the net coniferous volume per hectare (m<sup>3</sup>/ha).

### 3.2.13 Cycle Time (CYCLE)

1. CYCLE = PRIMARY + SECONDARY cycle time.
2. CYCLE\_INC6 is CYCLE – 6.0 hours. If < 0, then 0.
3. PRIMARY is the cycle time for the **appraised Transportation Route determined under section 1.4.4** and deemed to include all costs of loading, hauling, weighing, unloading, return time, and unavoidable delays.
  - a. If a district has developed standard cycle time schedules from specific road junctions to log dumps or 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.
  - b. The primary cycle time is calculated using distances each rounded to the nearest 0.1 km.
  - c. For a route to the point of appraisal that does not involve water transportation, use the following procedure to determine the cycle time:
    - i. Establish the geographical center point of each cutblock and project a line from this point to the nearest road, marking the intersection of the line and the nearest road as the junction for the cutblock; **or**
      - aa. **in the case of helicopter logging, the nearest road in (i) is the nearest road suitable as a drop point.**
    - ii. Determine the cycle time from the junction in subparagraph (c)(i) by road to the common junction. For the purpose of this subsection the common junction means the nearest point from the junctions in subparagraph (c)(i) over which all appraised timber on the cutting authority area must travel on the way to the point of appraisal;
    - iii. Weight the cycle times in subsection (ii) by the Total Net Cruise Volume for each cutblock to determine the weighted average cycle time to the common junction;
    - iv. Determine the cycle time from the common junction by road to the closest mill associated with the point of appraisal; and
      - aa. in the case of a route to the point of appraisal involving rail transportation,

- determine the cycle time from the common junction by road to the appraisal place of unloading for placement on railcars; and
- v. Sum the times calculated under subparagraph (iii) and (iv), and add an estimate for unavoidable delay of 93 minutes for cable yarding systems or 78 minutes for all other harvesting systems.
- d. For a route to the point of appraisal involving water transportation, use the following procedure to determine the cycle time:
- i. Establish the geographical center point of each cutblock and project a line from this point to the nearest road, marking the intersection of the line and the nearest road as the junction for the cutblock;
    - aa. **in the case of helicopter logging, the nearest road in (i) is the nearest road suitable as a drop point.**
  - ii. Determine the cycle time from the junction in subparagraph (d)(i) by road to the log dump;
    - aa. in the case of a changed circumstance reappraisal due to low water levels (refer to section 2.2.2 (2)(a)(vii)), determine the cycle time for the transportation route (refer to section 1.4.4) and the route for the next closest log dump (with the same water transportation system), and weight the cycle time by the Total Net Cruise Volume for each location;
 

A log dump means a location listed in Appendix VI; and that has not been determined unsuitable under section 1.4.4.1; or any location not included in Appendix VI that has in place authorizations allowing use of the location as a transfer point for water transportation of timber;
  - iii. Weight the cycle times in subsection (ii) by the Total Net Cruise Volume for each cutblock to determine the weighted average cycle time; and
  - iv. Sum the times calculated under subparagraph (iii), and add an estimate for unavoidable delay of 93 minutes for cable yarding systems or 78 minutes for all other harvesting systems.
4. SECONDARY is the cycle time when logs must be truck hauled following dewatering/unloading.
- a. 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 secondary cycle time.
  - b. To determine the secondary cycle time, use distances each rounded to the nearest 0.1 km from the reload site to the closest mill associated with the point of appraisal. In the case of multiple reload sites, use the reload site that results in the shortest cycle time to the mill.

### 3.2.14 Fort Nelson – Peace Selling Price Zone (ZONE\_9)

1. ZONE\_9 is 1 if the cutting authority is appraised with selling price zone 9, otherwise Zone 9 = 0.

**3.2.15 Deciduous Volume (DECID)**

1. DECID is the fraction of the Total Net Cruise Volume that is the Total Net Deciduous Volume.
2. If (DECID – BLOWDOWN) is <0 then DECID = 0.
3. See the Blowdown Volume variable for a definition of BLOWDOWN.
4. See the Cruise Based Cutting Authority variable for a definition of CB.

**3.2.16 Cruise Based Cutting Authority with <35% MPB (CB)**

1. CB is 1 if the cutting authority is cruise-based, 0 if scale based.
2. RG35 is 1 if Total Net Coniferous Volume of timber on the cutting authority area is comprised of 35% or greater red and grey Mountain Pine Beetle attacked Lodgepole pine, otherwise RG35 = 0.

**3.2.17 Cruise Based Cutting Authority with >35% MPB (CB)**

1. See above for definitions of CB and RG35.

**3.2.18 Latest Auction Year (AUC2016)**

1. AUC2017 = 1.

**3.2.19 Grey Attack MPB (GREY)**

1. GREY is the fraction of Total Net Coniferous Volume that is grey Mountain Pine Beetle attacked Lodgepole pine.
2. See above for definitions of CB and RG35.

**3.2.20 Ground Skidding Harvest (GS)**

1. GS\_SLOPE is (GSCCPC\_Slope)<sup>2</sup> or 1225 whichever is less
2. GSCCPC\_Slope is [(GSCC\_Slope15 \* GSCC\_Vol + GSPC\_Slope15 \* GSPC\_Vol) / (GSCC\_Vol + GSPC\_Vol)]
3. GSCC\_Slope15 is (GSCC Slope -15%) or 0 whichever is greater.
4. GSCC\_Slope is the slope of the cutting authority area that is to be ground skid clear cut.
5. GSPC\_Slope15 is (GSPC Slope -15%) or 0 whichever is greater.
6. GSPC\_Slope is the slope of the cutting authority area that is to be ground skid partial cut.
7. GSCC\_Vol is the volume in m<sup>3</sup> of the cutting authority area that is to be ground skid clear cut.

8. GSPC\_Vol is the volume in m<sup>3</sup> of the cutting authority area that is to be ground skid partial cut.
9. GS\_FRACTION is the fraction of harvest method volume that is appraised as ground skid clear cut and ground skid partial cut.

### 3.2.21 Decked Timber (DECK)

1. DECK is the fraction of total cutting authority volume that has been decked and/or partially harvested in the timber sale licence. Total cutting authority volume = total net cruise volume + volume of decked/partially harvested timber + right-of-way volume (standing and external to cutblocks).

### 3.2.22 Average Number of Bidders (DANB)

1. DANB is the average number of bidders for the proxy district, in which the cutting authority area is located (see Table 3-3).

**Table 3-3: Proxy District Average Number of Bidders (DANB)**

| District | Proxy District | TFL #    | Geographic Area of TSA       | TSA#     | Supply Block          | DANB |
|----------|----------------|----------|------------------------------|----------|-----------------------|------|
| DCC      | DCC            |          | Williams Lake                | 29       | Other than A, B, C, D | 3.2  |
|          | DCH            |          | Williams Lake                | 29       | A, B, C, D            | 2.4  |
| DCS      | DCS            |          |                              |          |                       | 3.5  |
| DFN      | DFN            |          |                              |          |                       | 1.0  |
| DKA      | DHW            | 18       | Robson Valley<br>Kamloops    | 17<br>11 | A                     | 2.9  |
|          | DKA            |          | Excluding proxy district DHW |          |                       | 4.0  |
| DKM      | DKM            |          |                              |          |                       | 1.8  |
| DMH      | DMH            |          |                              |          |                       | 3.8  |
| DMK      | DMK            |          |                              |          |                       | 2.0  |
| DND      | DND            |          |                              |          |                       | 3.1  |
| DOS      | DOS            |          |                              |          |                       | 3.1  |
| DPC      | DPC            |          |                              |          |                       | 1.7  |
| DPG      | DHW            | 18       | Robson Valley<br>Kamloops    | 17<br>11 | A                     | 2.9  |
|          | DPG            |          | Excluding proxy district DHW |          |                       | 3.3  |
| DQU      | DQU            |          |                              |          |                       | 3.3  |
| DRM      | DRM            |          |                              |          |                       | 2.3  |
| DSE      | DAB            | 3, 8, 23 | Arrow Boundary               | 1<br>2   |                       | 2.8  |
|          | DCO            | 55, 56   | Golden<br>Revelstoke         | 7<br>27  |                       | 2.2  |
|          | DKL            |          | Kootenay Lake                | 13       |                       | 2.5  |
| DSS      | DSS            |          |                              |          |                       | 2.7  |
| DVA      | DVA            |          | Vanderhoof                   | 24       | D, F                  | 2.2  |
|          | DJA            |          | Fort St. James               | 24       | A, B, C, E            | 2.4  |

### 3.2.23 Partial Cut Harvest Method (PC)

1. PC is the fraction of harvest method volume that is appraised as partial cut.  $PC = (100 - \text{CAPCUT } \%) / 100$ . See section 4.5 for definition of CAPCUT %. The 80% limit in the definition of CAPCUT in section 4.5 does not apply.

### 3.2.24 Average Slope of the Cutting Authority (SLOPE)

1. SLOPE is the cutting authority average slope (%) from the appraisal summary report.

### 3.2.25 Truck Haul Method

1. Haul method does not contribute to the calculation of a stumpage rate but must be determined for the transportation route (refer to section 1.4) to the point of appraisal, and reported in the appraisal data submission.
2. The haul method is considered Off-highway when the entire transportation route is over roads administered under the *Industrial Roads Act* and Forest Service Roads as defined in the *Forest Act*.
3. The haul method is considered Highway when a portion of the transportation route is over roads administered under:
  - a. the *Transportation Act*, or
  - b. the *Industrial Roads Act* and Forest Service Roads (as defined in the *Forest Act*) where prolonged known road restrictions (e.g., bridge load limit, narrow road, through rock cut, Regulations under the *Workers Compensation Act*, etc.) prevent the use of oversize loads.

### 3.2.26 Blowdown Volume (BLOWDOWN)

1. BLOWDOWN is the fraction of the Total Net Cruise Volume that is the Total Blowdown Volume. It is calculated using the volume weighted average blowdown % by harvest method.
2. If  $(\text{BLOWDOWN} - \text{GREY}) < 0$  then  $\text{BLOWDOWN} = 0$ .
3. See the Grey Attack MPB variable for a definition of GREY.

### 3.2.27 Currency Conversion Rate (EXCHANGE)

1. EXCHANGE is the Bank of Canada – US Exchange Rate US\$/C\$ (3 month average). This rate is published monthly in the Interior Appraisal Parameters.

### 3.2.28 12-Month Running Total Harvest (TOT\_HARV\_12MR)

1. TOT\_HARV\_12MR is the total Interior harvest volume over the previous 12 months, expressed in millions of cubic metres. This volume is published monthly in the Interior Appraisal Parameters.



### 3.2.29 Isolated Cutting Authority (ISOLATED)

1. ISOLATED is 1 if the DISTANCE is >100 km, otherwise ISOLATED is 0.
2. DISTANCE (km) is SSLD + MTR
3. SSLD is the Shortest Straight-Line Distance from the Center of the Cutting Authority to the juncture of a Major Transportation Route. The Centre of the Cutting Authority is determined by weighting the distance from the geographic center point of each cutblock in the cutting authority by the Gross Area of each cutblock. Notwithstanding this subsection,
  - a. a cutting authority geographically located in the Mackenzie District cannot have a SSLD to a Major Transportation Route located in the Peace District;
  - b. a cutting authority geographically located in the Skeena Stikine District cannot have a SSLD to a Major Transportation Route located in the **Stuart Nechako** District; or
  - c. a cutting authority geographically located in the **Stuart Nechako** District cannot have a SSLD to a Major Transportation Route located in the Cariboo-Chilcotin District.
4. MTR is the distance following the Major Transportation Route from the juncture found using the definition in subsection (3), to the closest support centre listed in Table 3-4. A Major Transportation Route has a road class of arterial, collector, freeway, highway or mainline road. An electronic file is available on the Timber Pricing Branch website and is the official record of roads that qualify as a Major Transportation Route, as approved by the Director.

**Table 3-4: Support Centre**

| Support Centre | Albers X | Albers Y |
|----------------|----------|----------|
| Castlegar      | 1607319  | 511171   |
| Chilliwack     | 1294782  | 467153   |
| Cranbrook      | 1739304  | 553889   |
| Fort St. John  | 1318482  | 1260855  |
| Kamloops       | 1401994  | 644576   |
| Kelowna        | 1468497  | 562390   |
| Penticton      | 1463073  | 518247   |
| Prince George  | 1213091  | 995542   |
| Quesnel        | 1234626  | 891124   |
| Smithers       | 924936   | 1087766  |
| Squamish       | 1205941  | 525058   |
| Terrace        | 831972   | 1060276  |
| Vernon         | 1478764  | 605572   |
| Williams Lake  | 1264550  | 797941   |

**3.2.30 Camp (CAMP)**

1. CAMP is the fraction of the total net cruise volume appraised as camp. An entire cutblock(s) volume must be included in the applicable volume (i.e. no splitting cutblocks).
2. Workers who work on the cutblock(s) must reside in a camp and travel each day of work during timber harvesting and hauling operations from the camp to the cutting authority area.
3. To qualify as a camp, 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,
  - d. Be located outside municipal boundaries and communities or settlements along a highway corridor, and
  - e. Be approved by the regional appraisal coordinator.
4. A list of approved camps is available on the Timber Pricing Branch website and is the official record.

### 3.3 Specified Operations

1. Subject to section 3.3.1(1), a specified operation cost estimate described in this section may be included in an appraisal data submission if it is used in the harvesting or transportation of timber on the cutting authority and meets the requirements.
  - a. In the case of a Timber Sale Licence the cost estimate is only included if it is required, or for high development costs (refer to section 3.3.6).
2. Specified operation cost estimates may be weighted according to the applicable net cruise volume. For Water and Special Transportation systems, and Uneven-aged Forest Management, the applicable volume must include the entire cutblock(s) volume (i.e. no splitting cutblocks).

#### 3.3.1 Water Transportation Systems

1. A water transportation cost estimate is included in an appraisal data submission if the transportation route selected for the purposes of section 1.4.4(3) includes the water transportation system.

##### 3.3.1.1 Surface Tow System

1. Towing is the transportation of logs by water and is deemed to include all costs of dumping, booming, developing and operating dumping and booming grounds, and towing.
2. The cost estimate may include an amount for each of the following:
  - a. Dump and Boom
    - i. Reservoir and Marine = \$2.76/m<sup>3</sup>  
(Reservoir: Arrow, Kinbasket, Ootsa, Revelstoke, and Williston)
    - ii. Natural Lake = \$1.60/m<sup>3</sup>
  - b. Tow
    - i. Reservoir and Marine = \$1.67/m<sup>3</sup>  
(Reservoir: Arrow, Kinbasket, Ootsa, Revelstoke, and Williston)
    - ii. Natural Lake = \$1.36/m<sup>3</sup>
  - c. Dewater and Reload = \$2.00/m<sup>3</sup>

(Only considered if a dam transfer is required or if logs are dewatered and reloaded on trucks for further transportation to the mill yard)

##### 3.3.1.2 Log Barge System

1. Barging is the transportation of logs by barge and is deemed to include all analogous costs involved in the barging of logs.
  - a. Log Barge = \$11.61/m<sup>3</sup>

### 3.3.2 Special Transportation Systems

#### 3.3.2.1 Rail Transportation

1. Rail transportation is the transportation of logs by rail and deemed to include all costs associated with servicing the appropriate cutting authorities, (excluding all on-site costs of owning and operating a camp facility).
2. The cost estimate for rail transportation may include an amount for each of the following:
  - a. Truck-to-Rail Transfer = \$2.00/m<sup>3</sup>  
(Only considered if railway transportation is used in combination with truck haul transportation)
  - b. Railway transportation is based on the following table for the points of origin shown.

**Table 3-5: Railway Transportation**

| Origin        | Cost Estimate          | Point of Appraisal |
|---------------|------------------------|--------------------|
| Leo Creek     | \$13.18/m <sup>3</sup> | Fort St. James     |
| Lovell        | \$17.31/m <sup>3</sup> | Fort St. James     |
| Bear Lake     | \$24.27/m <sup>3</sup> | Fort St. James     |
| Minaret Creek | \$26.66/m <sup>3</sup> | Fort St. James     |
| Niteal        | \$23.23/m <sup>3</sup> | Fort St. John      |

#### 3.3.2.2 Barge Transportation (Used for Truck Haul)

1. Barge transportation (used for truck haul) is the transportation of logging trucks by private barge/ferry where a transportation route is interrupted by a body of water and is deemed to include all costs of servicing the appropriate cutting authorities (including the operation of a bubble-system where applicable).

The cost estimate (regardless of ownership) is \$3.74/m<sup>3</sup>.

#### 3.3.2.3 Barge Transportation (Not Used for Truck Haul)

1. Barge transportation (not used for truck haul) is the transportation of crew when a cutting authority can be served only by water, and daily (operating days only) ferry/barge services are feasible for crew transportation.

The cost estimate (regardless of ownership) is \$1.29/m<sup>3</sup>.

### 3.3.3 Skyline and Intermediate Support Skyline

1. Except as provided in paragraph 4 of this section, a skyline specified operation cost estimate may be included in an appraisal for each cut block where the average yarding distance (slope) is greater than 300 metres, or intermediate supports are used.
2. The average yarding distance is determined by:
  - a. Drawing a series of transects (minimum four) with their origin at a tower 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.
  - b. Yarding distance will be measured as slope distance from the centre of the tower landing to the falling boundary.
  - c. The sum of transect lengths divided by the number of transects equals the average yarding distance.
3. 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 metres requirement is waived.
4. Cut blocks where the average yarding distance is 600 metres or greater (measured horizontally) will be considered as helicopter in the appraisal.
5. The specified operation cost estimate is: \$2.85/m<sup>3</sup> for the harvest method volume appraised as skyline.

### 3.3.4 Helicopter Logging

1. The specified operation cost estimate is \$99.64/m<sup>3</sup> for the harvest method volume appraised as Heli.

### 3.3.5 Horse Logging

1. The specified operation cost estimate is \$8.67/m<sup>3</sup> for the harvest method volume appraised as horse.

### 3.3.6 High Development Cost

1. For BCTS timber sale licences only, where the development cost estimate (DC) determined under chapter 4 is greater than \$3.06/m<sup>3</sup>, the high development cost specified operations estimate (HDC) is calculated as follows:

$$\text{HDC } \$/\text{m}^3 = \text{DC} - 1.38$$

$$\text{If } \text{DC} \leq 3.06, \text{ HDC} = 0$$

### 3.3.7 Uneven-Aged Forest Management

1. In some areas within the drier portions of the Interior, uneven-aged forest management is used to meet forest management objectives. This specified operation may be applied only where an uneven-aged stand is maintained by removing mature timber, either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely.
2. The uneven-aged forest management specified operation may be applied:
  - a. where greater than 50% of the net cruise volume (before leave tree reductions) has been retained, and
  - b. in the:
    - i. Interior Douglas-fir (IDF) BEC zone, or
    - ii. Sub-Boreal Pine-Spruce (SBPS) BEC zone, where the net cruise volume (before leave tree reductions) is greater than 70% Douglas-fir, or
    - iii. Sub-Boreal Spruce (SBS) BEC zone, where the net cruise volume (before leave tree reductions) is greater than 70% Douglas-fir and the cutting authority is within a legally designated ungulate winter range.
3. The specified operation cost estimate for uneven-aged forest management is \$1.50/m<sup>3</sup> (in addition to the partial cut contribution (PC) in section 3.1).

Where a partial cut is comprised of openings of less than 1 hectare in size, the PCUT percent is based on the cumulative volume of these openings divided by the volume of the block area surrounding them.

$$\text{PCUT} = \frac{\text{Total Net Cruise Volume required to be removed using a partial cut system}}{\text{Total Net Cruise Volume on the area where Partial Cutting is required}} * 100$$

(except if partial cut percent  $\geq 90\%$ , then PCUT = 0)

CAPCUT = Cutting Authority (CA) partial cut %. If CAPCUT%  $> 80\%$   
CAPCUT% = 80, otherwise:

$$\text{CAPCUT\%} = (\text{CA TNCRV} / \text{CA Gross TNCRV}) * 100$$

$$\text{CA Gross TNCRV (m}^3\text{)} = v\text{GS(C)} + (v\text{GS(P)} / \text{GS(PCUT/100)}) + v\text{OC(C)} + (v\text{OC(P)} / \text{OC(PCUT/100)}) + v\text{SK(C)} + v\text{Horse(C)} + v\text{Heli(C)} + (v\text{Heli(P)} / \text{Heli(PCUT/100)})$$

Where:

|          |   |  |
|----------|---|--|
| PCUT     | = | Logging method PCUT (%)  |
| CAPCUT   | = | Cutting Authority (CA) partial cut percent                                   |
| V        | = | Harvest Method Volume (m <sup>3</sup> ) required to be logged by each system |
| Heli (C) | = | helicopter logging (clear cut)   |
| Heli (P) | = | helicopter logging (partial cut)   |
| Horse(C) | = | horse logging (clear cut)  |
| GS (C)   | = | ground skidding (clear cut)  |
| GS (P)   | = | ground skidding (partial cut)  |
| OC(C)    | = | overhead cable logging (clear cut)   |
| OC(P)    | = | overhead cable logging (partial cut)   |
| SK(C)    | = | skyline logging (clear cut)  |

#### 4.5.1 Enhanced Silviculture

1. Costs for enhanced silviculture may be included in the calculation of the silviculture cost estimate for BEC units with an enhanced silviculture cost estimate in Table 4-7.
2. To qualify for the enhanced silviculture cost estimate, a management unit plan that includes management objectives and the associated silviculture regimes required to achieve those objectives must be in place and endorsed by the District Manager. There are a number of ways the endorsed management unit plan requirement can be satisfied:

- a. District Manager endorsed Type 4 or Integrated Silviculture Strategies that include (or have been revised to include) increased establishment densities.
  - b. Approved TFL Management plans that include increased establishment densities in the timber supply assumptions.
  - c. District Manager endorsed silviculture strategies or stocking standards.
  - d. District Manager endorsed forest health strategies.
3. To qualify for the enhanced silviculture cost estimate, the cutting authority area must be included in a Forest Stewardship Plan (FSP) that contains enhanced stocking standards. **Enhanced stocking standards** must specify the minimum planting density to be achieved **at regeneration date** for each applicable BEC unit.
  4. Management unit plans must include regeneration dates that are reflective of artificial regeneration, and a high minimum density of planted seedlings. The enhanced silviculture cost does not apply where natural regeneration or direct seeding is used to restock the harvest area.
  5. Costs in Table 4-7 for enhanced silviculture and in the Interior Douglas-fir BEC zones dk1, dk3, dk4, xh2, xm, and **Montane Spruce xk2** may only be included in the calculation of the silviculture cost estimate if the area is being managed to an even-aged stand as a result of damage caused by the 2017 wildfires.

#### 4.5.2 Root Disease Control

1. Costs for root disease control may only be included in the calculation of the TOA when the treatment is based on a field assessment and signed by a qualified professional.
2. The cost estimates are determined on the basis of information at hand using the procedures approved by the region or Timber Pricing Branch.

#### 4.5.3 Total Silviculture Cost Estimate

Total Silviculture (\$/m<sup>3</sup>) =

$$\text{Silviculture (\$/m}^3\text{)} + \frac{\text{Root Disease Control (\$)}}{\text{ATNCV or TNCRV (m}^3\text{)}^1}$$

<sup>1</sup> For scale based CAs, use ATNCV. For cruise based CAs use TNCRV.



**Table 4-7: BEC Silviculture Cost Estimates**

The dollar per hectare (\$/ha) cost estimates are net of overhead.

| BEC Unit | Basic \$/ha | Enhanced \$/ha | BEC Unit | Basic \$/ha | Enhanced \$/ha |
|----------|-------------|----------------|----------|-------------|----------------|
| BWBS     | 1203        | n/a            | ESSFwv   | 1091        | n/a            |
| BWBSdk   | 900         | n/a            | ESSFxc1  | 978         | n/a            |
| BWBSmk   | 1115        | n/a            | ESSFxc2  | 978         | n/a            |
| BWBSmw   | 1369        | n/a            | ESSFxc3  | 978         | 196            |
| BWBSvk   | 1203        | n/a            | ESSF xv1 | 372         | n/a            |
| BWBSwk1  | 1065        | n/a            | ESSF xv2 | 372         | n/a            |
| BWBSwk2  | 1151        | n/a            | ICH      | 1607        | n/a            |
| BWBSwk3  | 1151        | n/a            | ICHdk    | 1607        | 210            |
| CWH      | 510         | n/a            | ICHdm    | 946         | n/a            |
| CWHvm1   | 510         | n/a            | ICHdw1   | 1827        | n/a            |
| CWHvm2   | 510         | n/a            | ICHdw3   | 1564        | n/a            |
| CWHds1   | 510         | n/a            | ICHdw4   | 1771        | n/a            |
| CWHms1   | 510         | n/a            | ICHmc1   | 756         | n/a            |
| CWHws1   | 327         | n/a            | ICHmc2   | 484         | n/a            |
| CWHws2   | 595         | n/a            | ICHmk1   | 1140        | n/a            |
| ESSF     | 1091        | n/a            | ICHmk2   | 1343        | n/a            |
| ESSFdc1  | 1037        | n/a            | ICHmk3   | 1259        | 290            |
| ESSFdc2  | 1046        | n/a            | ICHmk4   | 1247        | n/a            |
| ESSFdc3  | 1046        | n/a            | ICHmk5   | 1247        | n/a            |
| ESSFdk1  | 1099        | n/a            | ICHmm    | 1607        | n/a            |
| ESSFdk2  | 1099        | n/a            | ICHmw1   | 1724        | n/a            |
| ESSFd v1 | 1091        | n/a            | ICHmw2   | 1771        | n/a            |
| ESSFd v2 | 1091        | n/a            | ICHmw3   | 1564        | 246            |
| ESSFmc   | 908         | 202            | ICHmw4   | 1771        | n/a            |
| ESSFmh   | 1037        | n/a            | ICHmw5   | 1771        | n/a            |
| ESSFmk   | 1091        | n/a            | ICHvc    | 1607        | n/a            |
| ESSFmm1  | 1091        | n/a            | ICHvk1   | 3053        | n/a            |
| ESSFmm2  | 1091        | n/a            | ICHvk2   | 2820        | 151            |
| ESSFmm3  | 1508        | n/a            | ICHwc    | 1607        | n/a            |
| ESSFmv1  | 688         | 332            | ICHwk1   | 2160        | n/a            |
| ESSFmv2  | 953         | n/a            | ICHwk2   | 2013        | 338            |
| ESSFmv3  | 923         | n/a            | ICHwk3   | 2013        | 157            |
| ESSFmv4  | 862         | n/a            | ICHwk4   | 2013        | 157            |
| ESSFmw   | 905         | n/a            | ICHxw    | 1607        | n/a            |
| ESSFmw1  | 905         | n/a            | IDF      | 910         | n/a            |
| ESSFvc   | 3502        | n/a            | IDFdc    | 910         | n/a            |
| ESSFwc2  | 1394        | n/a            | IDFdk1   | 1157        | 617            |
| ESSFwc3  | 1558        | 928            | IDFdk2   | 1137        | n/a            |
| ESSFwc4  | 1494        | n/a            | IDFdk3   | 593         | 1006           |
| ESSFwcv  | 1623        | n/a            | IDFdk4   | 811         | 933            |
| ESSFwh1  | 1511        | n/a            | IDFdk5   | 673         | n/a            |
| ESSFwh2  | 1508        | n/a            | IDFdm1   | 1174        | n/a            |
| ESSFwh3  | 1511        | n/a            | IDFdm2   | 673         | n/a            |
| ESSFwk1  | 1312        | 274            | IDFdw    | 910         | n/a            |
| ESSFwk2  | 1231        | n/a            | IDFmw1   | 1829        | n/a            |
| ESSFwm1  | 1508        | n/a            | IDFmw2   | 1772        | n/a            |
| ESSFwm2  | 1508        | n/a            | IDFww    | 910         | n/a            |
| ESSFwm3  | 1494        | n/a            | IDFww1   | 910         | n/a            |
| ESSFwm4  | 912         | n/a            | IDFxc    | 1689        | n/a            |

| BEC Unit            | Basic \$/ha | Enhanced \$/ha |
|---------------------|-------------|----------------|
| IDFxh1              | 2185        | n/a            |
| IDFxh2              | 1689        | 434            |
| IDFxh4              | 1721        | n/a            |
| IDF <del>x</del> k  | 910         | n/a            |
| IDFxm               | 910         | 851            |
| IDF <del>x</del> w  | 910         | n/a            |
| IDF <del>x</del> x2 | 74          | n/a            |
| MH                  | 1603        | n/a            |
| MH <del>m</del> m1  | 1603        | n/a            |
| MH <del>m</del> m2  | 1603        | n/a            |
| MS                  | 888         | n/a            |
| MSdc1               | 1035        | n/a            |
| MSdc2               | 1035        | n/a            |
| MSdc3               | 1035        | n/a            |
| MSdk                | 1131        | n/a            |
| MSdm1               | 862         | n/a            |
| MSdm2               | 964         | n/a            |
| MS <del>d</del> m3  | 964         | n/a            |
| MSdv                | 888         | n/a            |
| MS <del>d</del> w   | 1131        | n/a            |
| MSmw1               | 905         | n/a            |
| MS <del>m</del> w2  | 905         | n/a            |
| MSxk1               | 761         | n/a            |
| MSxk2               | 795         | 942            |
| MS <del>x</del> k3  | 755         | n/a            |
| MSxv                | 372         | 233            |
| PP                  | 74          | n/a            |
| PPxh1               | 74          | n/a            |
| PPxh2               | 74          | n/a            |
| PP <del>x</del> h3  | 74          | n/a            |
| SBPS                | 517         | n/a            |
| SBPSdc              | 599         | 299            |
| SBPSmc              | 461         | 318            |
| SBPSmk              | 568         | 418            |
| SBPSxc              | 285         | 320            |
| SBS                 | 920         | n/a            |
| SBSdh1              | 920         | n/a            |
| SBSdh2              | 920         | n/a            |
| SBSdk               | 987         | 297            |
| SBSdw1              | 1034        | 341            |
| SBSdw2              | 708         | 385            |

| BEC Unit | Basic \$/ha | Enhanced \$/ha |
|----------|-------------|----------------|
| SBSdw3   | 831         | 226            |
| SBSmc1   | 940         | 299            |
| SBSmc2   | 821         | 315            |
| SBSmc3   | 654         | 320            |
| SBSmh    | 920         | 310            |
| SBSmk1   | 911         | 191            |
| SBSmk2   | 867         | n/a            |
| SBSmm    | 872         | 216            |
| SBSmw    | 982         | 249            |
| SBSvk    | 1438        | 394            |
| SBSwk1   | 1223        | 132            |
| SBSwk2   | 1128        | n/a            |
| SBSwk3   | 1034        | 237            |
| SWB      | 1229        | n/a            |
| SBSmk    | 1229        | n/a            |
| SWBmks   | 1229        | n/a            |
| SWBvk    | 1229        | n/a            |
| SWBvks   | 1229        | n/a            |
| *BWBSdk1 | 886         | n/a            |
| *BWBSdk2 | 900         | n/a            |
| *BWBSmw1 | 1304        | n/a            |
| *BWBSmw2 | 1450        | n/a            |
| *ESSFdk  | 1099        | n/a            |
| *ESSFdm  | 912         | n/a            |
| *ESSFdv  | 1091        | n/a            |
| *ESSFvv  | 1623        | n/a            |
| *ESSFwc1 | 1511        | n/a            |
| *ESSFwm  | 1508        | n/a            |
| *ESSFxc  | 978         | n/a            |
| *ICHdw   | 1396        | n/a            |
| *ICHdw2  | 1665        | n/a            |
| *IDFdk   | 811         | n/a            |
| *MSdk1   | 1131        | n/a            |
| *MSxk    | 755         | n/a            |
| *PPdh1   | 74          | n/a            |
| *PPdh2   | 74          | n/a            |
| *SWBdk   | 1229        | n/a            |
| *SWBdks  | 1229        | n/a            |

\* Indicates BEC units that have expired and are not to be included in appraisals submitted after October 31, 2018. Reference applicable Land Management Handbook crosswalk tables where necessary.

## **6 Miscellaneous Policies**

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## 6.1 Coniferous Average Sawlog Stumpage Rates by Forest Zone and Species

1. Each of the following forest zones referred to in Tables 6-1, 6-2, 6-4, 6-4a, 6-5 and 6-6 is made up of the following forest districts and or geographic units:
  - a. North Central Zone - Mackenzie, Nadina, Prince George (less Robson Valley TSA), Quesnel and Stuart Nechako.
  - b. North East Zone - Fort Nelson and Peace.
  - c. North West Zone - Coast Mountain (excluding that portion that lies geographically within the North Coast Timber Supply Area), Skeena Stikine.
  - d. South Central Zone – Williams Lake TSA Blocks A, B, C, D, E & I.
  - e. South East Zone - Okanagan Shuswap, Rocky Mountain, Selkirk, and Thompson Rivers (plus Robson Valley TSA).
  - f. South West Zone - 100 Mile House, Cascades, and Williams Lake TSA Blocks F, G, H, and J to N.
2. Where a species of coniferous timber is not listed in Table 6-1, 6-2, 6-4, 6-4a and 6-5, the rate that must be used for that species of timber is the rate listed in the column headed as OTHER.

**Table 6-1: Coniferous Average Sawlog Stumpage Rates in \$/m<sup>3</sup>**

| FOREST ZONE   | BALSAM | CEDAR | FIR   | HEMLOCK | LARCH | L. PINE | SPRUCE | W. PINE | Y. PINE | OTHER <sup>1</sup> |
|---------------|--------|-------|-------|---------|-------|---------|--------|---------|---------|--------------------|
| North Central | 30.27  | -     | 42.10 | 31.97   | -     | 26.36   | 31.65  | -       | -       | 31.11              |
| North East    | 11.51  | -     | -     | -       | -     | 12.16   | 11.47  | -       | -       | 11.62              |
| North West    | 6.66   | 14.19 | -     | 3.42    | -     | 22.24   | 16.38  | -       | -       | 10.99              |
| South Central | 10.28  | -     | 11.99 | -       | -     | 14.65   | 17.02  | -       | -       | 14.65              |
| South East    | 24.42  | 27.17 | 27.96 | 19.24   | 27.23 | 25.15   | 24.89  | 21.58   | 28.54   | 25.83              |
| South West    | 30.23  | 29.19 | 28.20 | 30.80   | 23.58 | 29.89   | 31.37  | 31.15   | -       | 29.49              |

<sup>1</sup> Average for the Forest Zone

### 6.1.1 Community Forest Agreements

1. The sawlog stumpage rate for each species of coniferous timber harvested under any cutting authority issued under a Community Forest Agreement is the rate prescribed in Table 6-2 for the forest zone in which the cutting authority area is located.
2. Section 1.4.2, sections 6.1.2 through 6.5, commercial thinning in section 6.6, and sections 6.7 through 6.9 do not apply to Community Forest Agreement cutting authorities.
3. The stumpage rate determined under this section is redetermined on August 1 of each year in accordance with this section.
4. Notwithstanding subsection (1), (2), and (3), when a cutting authority is issued for the specific purpose to include projects funded by the Forest Enhancement Society of BC, the stumpage rate must be determined through a full appraisal (“fully appraised”). Refer to section 6.11 for details regarding cutting authorities with FESBC funding.

### 6.1.2 Woodlot Licences

1. Except as provided in subsection (2) and (8) of this section, the sawlog stumpage rate for each species of coniferous timber harvested under a cutting permit issued for a woodlot licence with an effective date after November 30, 2008 is the rate prescribed in Table 6-2 for the forest zone in which the cutting authority area is located.
2. Where a woodlot licence cutting permit has been issued with an effective date after November 30, 2008 for the purpose of using amounts from an eligible extended road amortization agreement in an appraisal, then the stumpage rate will be determined using the procedures in this manual excluding this section.
3. Except as provided in subsection (4) of this section, the sawlog stumpage rate for coniferous timber harvested under a road permit issued for a woodlot licence is the rate prescribed in Table 6-2 for the forest zone in which the timber mark applies.
4. 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 section 6.3.
5. The sawlog stumpage rate for each species of coniferous timber harvested under a blanket salvage cutting authority issued for a woodlot licence is the rate prescribed in Table 6-2 for the forest zone in which the blanket salvage cutting authority applies.
6. The stumpage rate determined under subsections (1), (3) and (5) of this section is redetermined on August 1, each year in accordance with this section.
7. Except as provided in subsections (2) and (4) of this section, sections 1.4.2, 6.1.1, 6.1.3 through 6.5, commercial thinning and Pre-harvest Waste Assessment in section 6.6, and sections 6.7 through 6.9 do not apply to Woodlot Licence cutting authorities.
8. Notwithstanding subsection (1) through (7), when a cutting authority is issued for the specific purpose to include projects funded by the Forest Enhancement Society of BC, the stumpage rate must be determined through a full appraisal

(“fully appraised”). Refer to section 6.11 for details regarding cutting authorities with FESBC funding.

**Table 6-2: Community Forest Agreements and Woodlot Licences:  
Coniferous Average Sawlog Stumpage Rates in \$/m<sup>3</sup>**

| FOREST ZONE   | BALSAM | CEDAR | FIR  | HEMLOCK | LARCH | L. PINE | SPRUCE | W. PINE | Y. PINE | OTHER <sup>1</sup> |
|---------------|--------|-------|------|---------|-------|---------|--------|---------|---------|--------------------|
| North Central | 4.54   | -     | 6.32 | 4.80    | -     | 3.95    | 4.75   | -       | -       | 4.67               |
| North East    | 1.73   | -     | -    | -       | -     | 1.82    | 1.72   | -       | -       | 1.74               |
| North West    | 1.00   | 2.13  | -    | 0.51    | -     | 3.34    | 2.46   | -       | -       | 1.65               |
| South Central | 1.54   | -     | 1.80 | -       | -     | 2.20    | 2.55   | -       | -       | 2.20               |
| South East    | 3.66   | 4.08  | 4.19 | 2.89    | 4.08  | 3.77    | 3.73   | 3.24    | 4.28    | 3.87               |
| South West    | 4.53   | 4.38  | 4.23 | 4.62    | 3.54  | 4.48    | 4.71   | 4.67    | -       | 4.42               |

<sup>1</sup> Average for the Forest Zone

### 6.1.3 Incidental Conifer in Deciduous Leading Stands

1. Except as provided in section 5.1.1(6), this section applies to coniferous timber in a cutting authority area where the total estimated volume of all deciduous species to be harvested is greater than 70% of the total estimated volume of all species to be harvested.
2.
  - a. The stumpage rate for coniferous timber is the rate prescribed in Table 6-3 for the smaller of the area of the forest district/district portion, timber supply area, region, or Area in which the entire cutting authority area for the tenure is located.
  - b. Where the Crown is responsible for basic silviculture on the cutting authority area, the stumpage rate for each species of coniferous timber must be the sum of the rate determined under paragraph (a) of this subsection and the silviculture levy determined under section 5.3.
3. A stumpage rate determined under subsection 2 must be redetermined on June 1, of each year in accordance with this section.
4. Notwithstanding subsection (2) in this section, the stumpage rate may be determined through a full appraisal in accordance with chapters 1, 2, 3, 4, and 5.
5.
  - a. In this section the area of a forest district or the area of a timber supply area does not include the area of a park located within that district or timber supply area.
  - b. In this section the area of a Tree Farm Licence will be included in the area of the district or timber supply area in which it is geographically located.

- c. Where the forestry licence to cut is issued without competition for the purposes described in paragraph (1)(a)(i) of this section the sawlog stumpage rate for such species of coniferous timber must be:
    - i. Except as provided in (ii), the stumpage rate in Table 6-1 for the forest zone in which the cutting authority area is located.
    - ii. If more than one-third of the total volume of coniferous timber on the cutting authority area is damaged timber as defined in section 6.4.1(3), the stumpage rate in Table 6-4 for the forest zone in which the cutting authority area is located.
    - iii. When the licence to cut is issued to the lowest eligible bidder on a contract issued for the purpose referred to in paragraph (1)(a)(i) of this subsection, the stumpage rate determined from the applicable paragraph (c)(i) or (c)(ii) above.
  - d. Where the forestry licence to cut is issued without competition meets the requirements set out in paragraph (1)(a)(ii) of this section, the coniferous sawlog stumpage rate must be \$1.20/m<sup>3</sup> when the licence to cut is issued to the lowest eligible bidder on a contract issued for the purpose referred to in paragraph (1)(a)(ii).
  - e. Notwithstanding any paragraph in this subsection when the timber on the cutting authority area will be scaled as chips or hogged tree material the reserve stumpage rate must be the rate from Table 6-7.
2. An upset stumpage rate determined under this section must be calculated using the *Interior Appraisal Manual* in effect on the date that the rate is determined and must not be less than the district's variable cost to prepare the timber for sale as calculated by the district manager.
  3. Notwithstanding subsections 1(c) or (d) the stumpage rate for the forestry licence to cut may be determined through a full appraisal in accordance with chapters 1, 2, 3, 4 and 5. The cruise data that is used in the appraisal may be from the cruise of a comparable cutting authority as per section 1.5.1.1.
  4. Except for a minister directed reappraisal (as provided in section 2.2.4), when the upset stumpage rate or stumpage rate is determined under this section, the total stumpage rate is fixed for the term of the cutting authority and all extensions.

### 6.3 Road Permit Stumpage Rates

1. a. In this section the area of a forest district or the area of a timber supply area does not include the area of a park located within that district or timber supply area.
  - b. In this section the area of a Tree Farm Licence will be included in the area of the district or timber supply area in which it is geographically located.
2. This section does not apply to Community Forest Agreements in section 6.1.1, Woodlots Licences in section 6.1.2 except 6.1.2(4), or any timber in the Research Forests noted in Table 6-7.
3. A stumpage rate determined under this section, other than for a road permit for a BCTS licence under subsection (6), must be re-determined annually on June 1st in accordance with this section.
4. Except as provided in subsection (6)(b), stumpage rates determined under this section are scale based for billing.
5. Except as provided in subsection (6) of this section, the stumpage rate for a road permit must be the stumpage rate:
  - a. from the table of licence average rates by district provided to the regional Area by Timber Pricing Branch if there is a minimum positive scale based billed volume of 500 m<sup>3</sup> of coniferous sawlogs from which the weighted average sawlog stumpage rate may be determined, or
  - b. where a rate under (a) is not available, the stumpage rate is that prescribed in Table 6-3 for the smaller area of the forest district/district portion, timber supply area, region, or Area in which the entire cutting authority area for the tenure is located.
6. a. The total stumpage rate (\$/m<sup>3</sup>) for a road permit granted to the holder of a scale based timber sale licence entered into under section 20 of the Act must be the same as the total stumpage rate (\$/m<sup>3</sup>) for the timber sale licence which entitled the holder to apply for the road permit.
  - b. The total stumpage rate (\$/ha) for a road permit granted to the holder of a cruise based timber sale licence entered into under section 20 of the Act must be the same as the total stumpage rate (\$/ha) of the timber sale licence which entitled the holder to apply for the road permit.
7. 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.
8. **The bonus bid if applicable will be added to the stumpage rate determined under subsection 5(b).**



- f. Salvage cannot occur on a road right-of-way which has an active timber mark associated with it.
- g. Except for a minister directed reappraisal (as provided in section 2.2.4), a stumpage rate determined under this section is fixed for the term of the cutting authority and all extensions.
5. a. The Damaged Timber sawlog stumpage rate for each species of coniferous timber is the rate in Table 6-4 or 6-4a for the Forest Zone in which the cutting authority area is located. The stumpage rates in Table 6-4a may be used when the:
- estimated total net coniferous volume of timber on each cutblock is comprised of 80% or more Burnt Timber<sup>1</sup> (Burnt timber means any trees that meet the definition of Fire Codes A, B or C as per the Cruising Manual), and
  - the burnt timber is evenly distributed throughout the cutblock(s).
- b. Where the Crown is responsible for basic silviculture on the cutting authority area, the stumpage rate for each species of coniferous timber must be the sum of the rate determined under paragraph (a) of this subsection and the silviculture levy determined under section 5.3.
- c. Notwithstanding paragraph (a), the stumpage rate for Damaged Timber may be determined through a full appraisal in accordance with chapters 1, 2, 3, 4 and 5.
6. The Post-Harvest Material sawlog stumpage rate for each species of coniferous timber is the rate in Table 6-5 for the forest zone in which the cutting authority area is located.

**Table 6-4: Coniferous Average Sawlog Stumpage Rates for Salvage of Damaged Timber in \$/m<sup>3</sup>**

| FOREST ZONE   | BALSAM | CEDAR | FIR   | HEMLOCK | LARCH | L. PINE | SPRUCE | W. PINE | Y. PINE | OTHER <sup>1</sup> |
|---------------|--------|-------|-------|---------|-------|---------|--------|---------|---------|--------------------|
| North Central | 18.16  | -     | 25.26 | 19.18   | -     | 15.82   | 18.99  | -       | -       | 18.66              |
| North East    | 6.91   | -     | -     | -       | -     | 7.29    | 6.88   | -       | -       | 6.97               |
| North West    | 3.99   | 8.51  | -     | 2.05    | -     | 13.34   | 9.83   | -       | -       | 6.60               |
| South Central | 6.17   | -     | 7.20  | -       | -     | 8.79    | 10.21  | -       | -       | 8.79               |
| South East    | 14.65  | 16.30 | 16.77 | 11.55   | 16.34 | 15.09   | 14.93  | 12.95   | 17.12   | 15.50              |
| South West    | 18.14  | 17.51 | 16.92 | 18.48   | 14.15 | 17.93   | 18.82  | 18.69   | -       | 17.70              |

<sup>1</sup> Average for the Forest Zone

<sup>1</sup> Eighty (80) percent or more of the estimated total net coniferous volume defined as burnt timber in each cutblock, based on a professional estimate by a forest professional registered with the Association of BC Forest Professionals. The professional estimate must include a description and supporting information of how the estimate was generated.

**Table 6-4a: Coniferous Average Sawlog Stumpage Rates for Salvage of Fire Damaged Timber in \$/m<sup>3</sup>**

| FOREST ZONE   | BALSAM | CEDAR | FIR   | HEMLOCK | LARCH | L. PINE | SPRUCE | W. PINE | Y. PINE | OTHER <sup>1</sup> |
|---------------|--------|-------|-------|---------|-------|---------|--------|---------|---------|--------------------|
| North Central | 16.94  | -     | 25.26 | 18.52   | -     | 13.26   | 18.27  | -       | -       | 17.76              |
| North East    | 2.90   | -     | -     | -       | -     | 3.12    | 3.06   | -       | -       | 3.06               |
| North West    | 2.43   | 5.70  | -     | 0.89    | -     | 9.36    | 6.36   | -       | -       | 4.24               |
| South Central | 0.99   | -     | 1.70  | -       | -     | 8.79    | 6.69   | -       | -       | 4.34               |
| South East    | 11.71  | 15.08 | 14.76 | 8.17    | 13.93 | 12.42   | 12.25  | 10.11   | 14.59   | 13.08              |
| South West    | 17.07  | 16.01 | 15.20 | 16.30   | 9.99  | 17.39   | 18.49  | 17.45   | -       | 16.59              |

<sup>1</sup> Average for the Forest Zone**Table 6-5: Coniferous Average Sawlog Stumpage Rates for Salvage of Post-Harvest Material in \$/m<sup>3</sup>**

| FOREST ZONE   | BALSAM | CEDAR | FIR   | HEMLOCK | LARCH | L. PINE | SPRUCE | W. PINE | Y. PINE | OTHER <sup>1</sup> |
|---------------|--------|-------|-------|---------|-------|---------|--------|---------|---------|--------------------|
| North Central | 7.57   | -     | 10.53 | 7.99    | -     | 6.59    | 7.91   | -       | -       | 7.78               |
| North East    | 2.88   | -     | -     | -       | -     | 3.04    | 2.87   | -       | -       | 2.91               |
| North West    | 1.66   | 3.55  | -     | 0.85    | -     | 5.56    | 4.10   | -       | -       | 2.75               |
| South Central | 2.57   | -     | 3.00  | -       | -     | 3.66    | 4.26   | -       | -       | 3.66               |
| South East    | 6.10   | 6.79  | 6.99  | 4.81    | 6.81  | 6.29    | 6.22   | 5.40    | 7.13    | 6.46               |
| South West    | 7.56   | 7.30  | 7.05  | 7.70    | 5.90  | 7.47    | 7.84   | 7.79    | -       | 7.37               |

<sup>1</sup> Average for the Forest Zone

#### 6.4.2 Blanket Salvage Cutting Authorities

1. This section may apply to cutting authorities issued under licences with an allowable annual cut or maximum harvest volume; excluding Community Forest Agreements in section 6.1.1, Woodlots Licences in section 6.1.2, BCTS or any timber in the Research Forests noted in Table 6-7.
2. Cutblocks amended into blanket salvage cutting authorities prior to February 15, 2016, must use section 6.4.2 of this manual as it was prior to February 15, 2016.
3. Cutblocks amended into blanket salvage cutting authorities on or after February 15, 2016 must be consistent with the Deputy Minister Memo: *Harvesting under a Blanket Salvage Permit (For Interior Regions)* signed January 29, 2016, where the cutblocks must be:
  - a. less than or equal to 15 hectares in size and 5000 m<sup>3</sup> in volume; (unless the silviculture system used on the cut block is other than clear cutting, and at the completion of harvest the trees retained on the harvested area conform to the stocking standards specified in an approved Forest Stewardship Plan); and
  - b. issued for purposes of harvesting damaged timber as defined in section 6.4.1 (3); and
  - c. consistent with *District Guidelines for Blanket Salvage Cutting Authorities*.

4. The stumpage rate for each species of coniferous timber on the cutting authority area is the stumpage rate for that species indicated in Table 6-4 or 6-4a for the forest zone in which the cutting authority area is located. The stumpage rates in Table 6-4a may be used when the:
  - a. estimated total net coniferous volume of timber on each cutblock is comprised of 80% or more Burnt Timber<sup>1</sup> (Burnt Timber means any trees that meet the definition of Fire Codes A, B or C as per the Cruising Manual), and
  - b. the burnt timber is evenly distributed throughout the cutblock(s).
5. All blanket salvage cutting authorities are scale based for billing.
6. A stumpage rate determined under this section must be re-determined annually on June 1st in accordance with this section.
7. The bonus bid if applicable will be added to the stumpage rate determined under subsection 4.

### 6.4.3 Cruise Based Salvage Cutting Authorities

1. This section may apply to cutting authorities entered into under a Timber Sale Licence, or issued under licences with an allowable annual cut or maximum harvest volume; excluding Community Forest Agreements in section 6.1.1, Woodlots Licences in section 6.1.2, or any timber in the Research Forests noted in Table 6-7.
2. The primary purpose for the cutting authority must be the removal of Mountain Pine Beetle (MPB) attacked Lodgepole pine where:
  - a. The estimated total net coniferous volume of timber on each cutblock for the cutting authority area is comprised of 75% or more grey MPB attacked Lodgepole pine<sup>2</sup>; and
  - b. The conifer species other than Lodgepole pine must be evenly distributed throughout each cutblock.
3. The stand-as-a-whole stumpage rate on the cutting authority area is the greater of:
  - a. Stumpage rate

$$= \text{BASE RATE} - [1.480 * (\text{CYCLE} + (0.5 * \text{CYCLE\_INC6})) + 9.555 * \text{ZONE 9} + (0.02637 * \text{ISOLATED} * (\text{DISTANCE} - 100))] * \text{CPIF} - [\text{SO's} * (\text{CPI/ACPI})];$$

Where:

**BASE RATE** = Rate indicated in Table 6-6 for the Forest Zone in which the cutting authority is located.

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<sup>1</sup> Eighty (80) percent or more of the estimated total net coniferous volume defined as burnt timber in each cutblock, based on a professional estimate by a forest professional registered with the Association of BC Forest Professionals. The professional estimate must include a description and supporting information of how the estimate was generated.

<sup>2</sup> Seventy-five (75) percent or more of the estimated total net coniferous volume defined as grey attack in each cutblock, based on a professional estimate by a forest professional registered with the Association of BC Forest Professionals. The professional estimate must include a description and supporting information of how the estimate was generated.

- CYCLE = as defined and measured in accordance with section 3.2.13.
- CYCLE\_INC6, = as defined in section 3.2
- ZONE 9,  
ISOLATED,  
DISTANCE,  
CPI, and CPIF
- SO's = the sum of the transportation specified operations that apply to the transportation route from section 3.3. **As per section 3.4, a low grade factor is applied.**
- ACPI = 143.0 (the average CPI for the cost base (2015/16))

b. The prescribed minimum stumpage rate.

**Table 6-6: Base Rate\* for Cruise Based Salvage Cutting Authorities by Forest Zone**

| FOREST ZONE   | BASE RATE**(\$/m <sup>3</sup> ) | TSL BASE RATE***(\$/m <sup>3</sup> ) |
|---------------|---------------------------------|--------------------------------------|
| North Central | 10.50                           | 24.30                                |
| North East    | 10.50                           | 24.30                                |
| North West    | 10.50                           | 24.30                                |
| South Central | 1.62                            | 17.19                                |
| South East    | 6.60                            | 23.88                                |
| South West    | 3.74                            | 21.03                                |

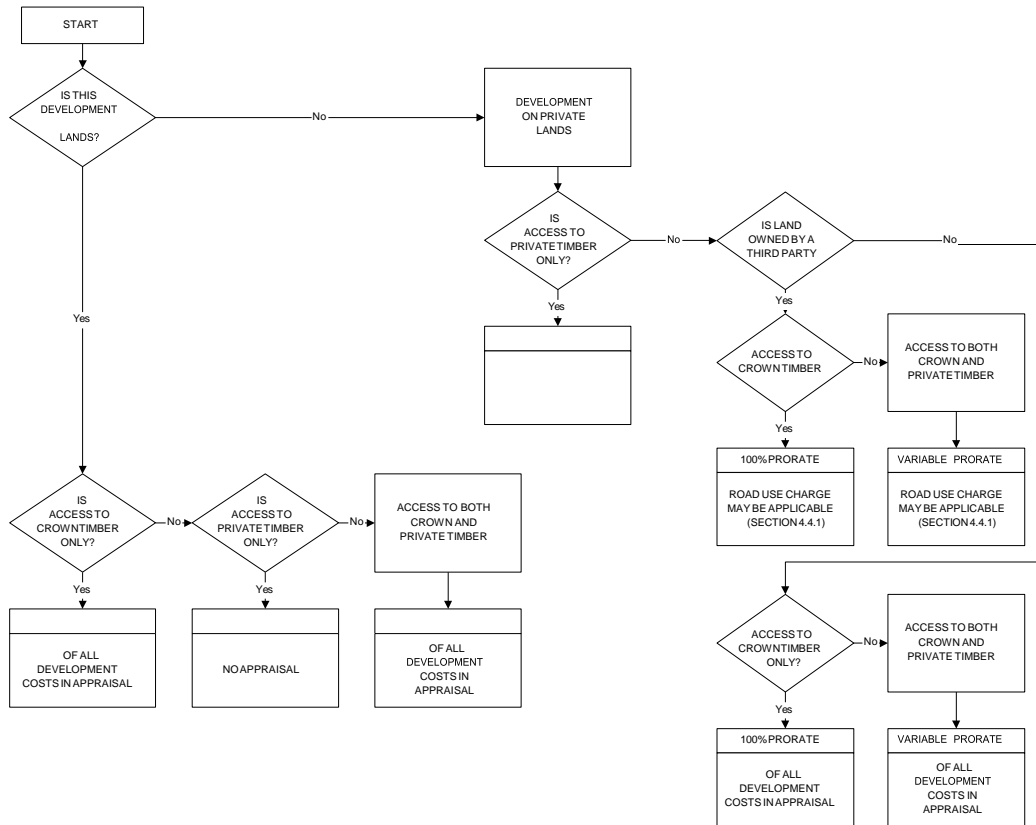
\* Rate prior to adjustments for transportation and zone 9

\*\*The Base Rate for cutting authorities issued under licences with an allowable annual cut or maximum harvest volume

\*\*\*The Base Rate for cutting authorities entered into under a Timber Sale Licence

4. All cruise based salvage cutting authorities under this section are cruise based for billing.
5. The net merchantable volume per hectare for the cutting authority area must be determined using the method described in section 2.9.1 of the *Cruising Manual*.
6. The total net merchantable volume is equal to the net merchantable area multiplied by the net merchantable volume per hectare.
7. A stumpage rate determined under this section must be re-determined on the 1<sup>st</sup> day of the month following the month in which this section is updated with a new cruise based salvage equation. As per section 5.1 (3), this does not apply to cutting authorities entered into under a Timber Sale Licence.

## Appendix II Development Cost Proration



Crown Timber = Appraised timber including appraised Timber Licences

Private Timber = Non-appraised timber

Variable Prorate = A tributary-volume type prorate between appraised and non-appraised timber

### Appendix III Relative Soil Moisture to Absolute Soil Moisture Conversion Table

| BGC     | Relative Soil Moisture Regime Class (from field guide) |    |    |      |       |       |      |        |
|---------|--|----|----|------|-------|-------|------|--------|
|         | 0  | 1  | 2  | 3    | 4     | 5     | 6    | 7      |
| BGxh1   | XD   | XD | XD | ED   | ED    | VD/MD | SD/F | M/VM/W |
| BGxh2   | XD   | XD | XD | ED   | ED    | VD/MD | SD/F | M/VM/W |
| BGxh3   | XD   | XD | XD | ED   | ED    | VD/MD | SD/F | M/VM/W |
| BGxw1   | XD   | XD | ED | VD   | VD/MD | SD/F  | M/VM | W      |
| BGxw2   | XD   | XD | ED | VD   | VD/MD | SD/F  | M/VM | W      |
| BWBSdk  | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| BWBSmk  | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| BWBSmw  | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| BWBSvk  | VD   | MD | SD | SD   | F     | M     | VM   | W      |
| BWBSwk1 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| BWBSwk2 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| BWBSwk3 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| CWHds1  | ED   | VD | MD | MD   | SD/F  | F     | M/VM | W      |
| CWHms1  | VD   | VD | MD | MD   | SD/F  | M     | VM   | W      |
| CWHvm1  | MD   | MD | SD | F    | M     | M     | VM   | W      |
| CWHvm2  | MD   | MD | SD | F    | M     | M     | VM   | W      |
| CWHws1  | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| CWHws2  | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFdc1 | VD   | MD | MD | SD   | SD/F  | M     | VM   | W      |
| ESSFdc2 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFdc3 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFdk1 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFdk2 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFdv1 | VD   | VD | MD | MD   | SD/F  | M     | VM   | W      |
| ESSFdv2 | VD   | VD | MD | MD   | SD/F  | M     | VM   | W      |
| ESSFmc  | VD   | MD | SD | SD   | F     | M     | VM   | W      |
| ESSFmh  | VD   | MD | MD | SD   | SD/F  | M     | VM   | W      |
| ESSFmk  | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFmm1 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFmm2 | VD   | MD | MD | SD   | F     | M     | VM   | W      |
| ESSFmm3 | MD   | MD | SD | SD/F | F     | M     | VM   | W      |
| ESSFmv1 | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| ESSFmv2 | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| ESSFmv3 | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| ESSFmv4 | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| ESSFmw  | VD   | VD | MD | SD   | F     | M     | VM   | W      |
| ESSFmw1 | VD   | VD | MD | SD   | F     | M     | VM   | W      |

| Relative Soil Moisture Regime Class (from field guide) |    |    |    |      |      |    |      |      |
|--|----|----|----|------|------|----|------|------|
| BGC  | 0  | 1  | 2  | 3    | 4    | 5  | 6    | 7    |
| ESSFmw2  | VD | VD | MD | SD   | F    | M  | VM   | W    |
| ESSFvc   | MD | SD | SD | F    | M    | M  | VM   | W    |
| ESSFwc2  | MD | MD | SD | F    | M    | M  | VM   | W    |
| ESSFwc3  | MD | MD | SD | F    | M    | M  | VM   | W    |
| ESSFwc4  | MD | MD | SD | F    | M    | M  | VM   | W    |
| ESSFwcv  | MD | SD | SD | F    | M    | VM | W    | W    |
| ESSFwh1  | MD | MD | SD | F    | F    | M  | VM   | W    |
| ESSFwh2  | MD | MD | SD | SD/F | F    | M  | VM   | W    |
| ESSFwh3  | MD | MD | SD | F    | F    | M  | VM   | W    |
| ESSFwk1  | MD | MD | SD | F    | M    | M  | VM   | W    |
| ESSFwk2  | MD | MD | SD | F    | M    | M  | VM   | W    |
| ESSFwm1  | MD | MD | SD | F    | F    | M  | VM   | W    |
| ESSFwm2  | MD | MD | SD | F    | F    | M  | VM   | W    |
| ESSFwm3  | MD | MD | SD | F    | F    | M  | VM   | W    |
| ESSFwm4  | MD | MD | MD | SD   | F    | M  | VM   | W    |
| ESSFwv   | MD | MD | SD | SD   | F    | M  | VM   | W    |
| ESSFxc1  | VD | VD | VD | MD   | SD/F | M  | VM   | W    |
| ESSFxc2  | VD | VD | VD | MD   | SD/F | M  | VM   | W    |
| ESSFxc3  | VD | VD | VD | MD   | SD/F | M  | VM   | W    |
| ESSF xv1   | VD | VD | VD | MD   | SD/F | M  | VM   | W    |
| ESSF xv2   | VD | VD | VD | MD   | SD/F | M  | VM   | W    |
| ICHdk  | VD | VD | MD | MD   | F    | M  | M/VM | VM   |
| ICHdm  | VD | VD | MD | SD   | F    | M  | M/VM | VM   |
| ICHdw1   | ED | VD | MD | MD   | SD   | M  | M    | VM   |
| ICHdw3   | ED | VD | MD | MD   | SD   | M  | M    | VM   |
| ICHdw4   | ED | VD | MD | MD   | SD   | M  | M    | VM   |
| ICHmc1   | VD | MD | SD | SD   | F    | M  | VM   | W    |
| ICHmc2   | VD | MD | SD | SD   | F    | M  | VM   | W    |
| ICHmk1   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmk2   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmk3   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmk4   | VD | VD | MD | SD   | F    | M  | VM   | W    |
| ICHmk5   | VD | VD | MD | SD   | F    | M  | VM   | W    |
| ICHmm  | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmw1   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmw2   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmw3   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmw4   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHmw5   | VD | MD | MD | SD   | F    | M  | VM   | VM/W |
| ICHvc  | MD | SD | SD | F    | M    | M  | VM   | W    |
| ICHvk1   | MD | MD | SD | F    | M    | M  | VM   | W    |

| BGC     | Relative Soil Moisture Regime Class (from field guide) |    |    |       |       |      |    |      |
|---------|--|----|----|-------|-------|------|----|------|
|         | 0  | 1  | 2  | 3     | 4     | 5    | 6  | 7    |
| ICHvk2  | MD   | SD | SD | F     | M     | M    | VM | W    |
| ICHwc   | MD   | MD | SD | F     | F     | M    | VM | W    |
| ICHwk1  | VD   | MD | SD | F     | F     | M    | VM | W    |
| ICHwk2  | VD   | MD | SD | F     | F     | M    | VM | W    |
| ICHwk3  | VD   | MD | SD | F     | F     | M    | VM | W    |
| ICHwk4  | VD   | MD | SD | F     | F     | M    | VM | W    |
| ICHxw   | ED   | ED | VD | MD    | SD    | M    | M  | VM   |
| IDFdc   | ED   | ED | VD | MD    | MD    | SD/F | M  | VM/W |
| IDFdk1  | ED   | ED | VD | VD/MD | MD    | SD/F | M  | VM/W |
| IDFdk2  | ED   | ED | VD | VD/MD | MD    | SD/F | M  | VM/W |
| IDFdk3  | ED   | ED | VD | VD    | MD    | SD/F | M  | VM   |
| IDFdk4  | ED   | ED | VD | VD    | MD    | SD/F | M  | VM   |
| IDFdk5  | ED   | ED | VD | VD    | MD    | SD/F | M  | VM   |
| IDFdm1  | ED   | ED | VD | VD    | MD    | SD/F | M  | VM/W |
| IDFdm2  | ED   | ED | ED | VD    | MD    | SD/F | M  | VM   |
| IDFdw   | ED   | ED | ED | VD    | MD    | SD/F | M  | VM   |
| IDFmw1  | ED   | ED | VD | MD    | SD    | F    | M  | VM   |
| IDFmw2  | ED   | ED | VD | MD    | SD    | F    | VM | W    |
| IDFww   | ED   | ED | VD | MD    | SD/F  | M    | VM | W    |
| IDFxc   | XD   | ED | VD | VD    | VD/MD | SD/F | M  | VM/W |
| IDFxb1  | XD   | ED | ED | VD    | VD/MD | SD/F | M  | VM/W |
| IDFxb2  | XD   | ED | ED | VD    | VD/MD | SD/F | M  | VM/W |
| IDFxb4  | XD   | ED | ED | VD    | MD    | SD/F | M  | VM/W |
| IDFxbk  | XD   | XD | ED | ED    | VD    | SD/F | M  | VM/W |
| IDFxbm  | XD   | ED | ED | VD    | MD    | SD/F | M  | VM/W |
| IDFxbw  | XD   | ED | ED | VD    | VD/MD | SD/F | M  | VM/W |
| IDFxbx2 | XD   | XD | ED | ED    | VD    | SD   | M  | VM/W |
| MHm1    | SD   | SD | F  | F     | M     | VM   | W  | W    |
| MHm2    | SD   | SD | F  | F     | M     | VM   | W  | W    |
| MHwh1   | SD   | SD | F  | F     | M     | VM   | W  | W    |
| MSdc1   | VD   | VD | MD | MD    | SD/F  | M    | W  | W    |
| MSdc2   | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdc3   | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdk    | VD   | VD | MD | MD    | SD    | M    | M  | VM/W |
| MSdm1   | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdm2   | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdm3   | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdv    | VD   | VD | MD | MD    | SD/F  | M    | VM | W    |
| MSdw    | VD   | VD | MD | MD    | SD    | M    | M  | VM/W |
| MSmw1   | VD   | VD | MD | SD    | SD/F  | M    | VM | W    |
| MSmw2   | VD   | VD | MD | SD    | SD/F  | M    | VM | W    |



| BGC     | Relative Soil Moisture Regime Class (from field guide) |    |    |    |       |      |      |      |
|---------|--|----|----|----|-------|------|------|------|
|         | 0  | 1  | 2  | 3  | 4     | 5    | 6    | 7    |
| MSxk1   | VD   | VD | VD | MD | SD/F  | M    | VM   | W    |
| MSxk2   | VD   | VD | VD | MD | SD/F  | M    | VM   | W    |
| MSxk3   | VD   | VD | VD | MD | SD/F  | M    | VM   | W    |
| MSxv    | VD   | VD | VD | MD | SD/F  | F    | VM   | W    |
| PPxh1   | XD   | XD | ED | VD | VD/MD | SD/F | M/VM | W    |
| PPxh2   | XD   | XD | ED | VD | VD/MD | SD/F | M/VM | W    |
| PPxh3   | XD   | XD | ED | VD | VD/MD | SD/F | M    | VM/W |
| SBPSdc  | ED   | ED | VD | MD | SD    | F    | M/VM | W    |
| SBPSmc  | VD   | VD | VD | MD | SD    | F    | M/VM | W    |
| SBPSmk  | ED   | VD | VD | MD | SD    | F    | M/VM | W    |
| SBPSxc  | ED   | ED | VD | VD | MD    | SD   | M    | W    |
| SBSdh1  | VD   | MD | MD | SD | SD    | F    | M    | W    |
| SBSdh2  | VD   | MD | MD | SD | SD    | F    | M    | W    |
| SBSdk   | VD   | MD | MD | SD | SD    | F    | M/VM | W    |
| SBSdw1  | VD   | MD | MD | SD | SD    | F    | M    | W    |
| SBSdw2  | VD   | MD | MD | SD | SD    | F    | M    | W    |
| SBSdw3  | VD   | MD | MD | SD | SD    | F    | M    | W    |
| SBSmc1  | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSmc2  | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSmc3  | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSmh   | VD   | MD | MD | SD | SD    | M    | VM   | W    |
| SBSmk1  | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSmk2  | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSmm   | VD   | VD | MD | SD | SD/F  | M    | VM   | W    |
| SBSmw   | VD   | MD | MD | SD | F     | M    | VM   | W    |
| SBSvk   | MD   | SD | SD | F  | M     | M    | VM   | W    |
| SBSwk1  | VD   | MD | SD | F  | F     | M    | VM   | W    |
| SBSwk2  | VD   | MD | SD | F  | F     | M    | VM   | W    |
| SBSwk3  | VD   | MD | SD | F  | F     | M    | VM   | W    |
| SWBmk   | MD   | MD | SD | SD | F     | M    | VM   | W    |
| SWBmks  | MD   | MD | SD | SD | F     | M    | VM   | W    |
| SWBvk   | MD   | MD | SD | SD | F     | M    | VM   | W    |
| SWBvks  | MD   | MD | SD | SD | F     | M    | VM   | W    |
| ESSFdew | VD   | MD | MD | SD | F     | M    | VM   | W    |
| ESSFdkw | VD   | MD | MD | SD | F     | M    | VM   | W    |
| ESSFdvw | VD   | MD | MD | SD | F     | M    | VM   | W    |
| ESSFmmw | MD   | MD | SD | F  | M     | M    | VM   | W    |
| ESSFwmw | MD   | SD | SD | F  | M     | M    | W    | W    |
| ESSFxew | VD   | VD | MD | SD | SD/F  | M    | VM   | W    |
| ESSFxvw | VD   | MD | MD | SD | F     | M    | VM   | W    |
| ESSFvew | MD   | SD | SD | F  | M     | VM   | W    | W    |

NOTES:

- ED = Extremely
- VD = Very Dry
- MD = Moderately Dry
- SD = Slightly Dry
- F = Fresh
- M = Moist
- VM = Very Moist
- W = Wet

| Absolute Soil Moisture | Soil Moisture Code |
|------------------------|--------------------|
| ED, VD, or MD          | D-Dry              |
| SD or F                | M-Moist            |
| M, VM or W             | W-Wet              |

## Appendix VI Appraisal Log Dumps

| Area  | District         | Marine (M)<br>Natural (N) or<br>Reservoir (R) | Water Body Name     | Dump Location Name     |
|-------|------------------|---|---------------------|------------------------|
| NORTH | Coast Mountain   | M   | Devastation Channel | Heysham Creek          |
| NORTH | Coast Mountain   | M   | Devastation Channel | Hugh Creek             |
| NORTH | Coast Mountain   | M   | Devastation Channel | North Kitsaway         |
| NORTH | Coast Mountain   | M   | Devastation Channel | Pike/Sleeman           |
| NORTH | Coast Mountain   | M   | Devastation Channel | South Kitsaway         |
| NORTH | Coast Mountain   | M   | Douglas Channel     | Miskatla               |
| NORTH | Coast Mountain   | M   | Eagle Bay           | Eagle Bay              |
| NORTH | Coast Mountain   | M   | Gardner Canal       | Barrie Creek           |
| NORTH | Coast Mountain   | M   | Gardner Canal       | Collins Bay            |
| NORTH | Coast Mountain   | M   | Gardner Canal       | Kemano Bay             |
| NORTH | Coast Mountain   | M   | Kildala Arm         | Dala River             |
| NORTH | Coast Mountain   | M   | Kildala Arm         | Falls River            |
| NORTH | Coast Mountain   | M   | Kitimat Arm         | Minette Bay            |
| NORTH | Coast Mountain   | M   | Verney Passage      | Cheenis Creek          |
| NORTH | Mackenzie        | R   | Williston Lake      | Bear Valley**          |
| NORTH | Mackenzie        | R   | Williston Lake      | Chowika**              |
| NORTH | Mackenzie        | R   | Williston Lake      | Factor Ross            |
| NORTH | Mackenzie        | R   | Williston Lake      | Ingenika               |
| NORTH | Mackenzie        | R   | Williston Lake      | Manson**               |
| NORTH | Mackenzie        | R   | Williston Lake      | Mesilinka              |
| NORTH | Mackenzie        | R   | Williston Lake      | Omineca                |
| NORTH | Mackenzie        | R   | Williston Lake      | Ospika**               |
| NORTH | Mackenzie        | R   | Williston Lake      | Swannell               |
| NORTH | Nadina           | R   | Knewstubb Lake      | Ootsa Cheslatta        |
| NORTH | Nadina           | R   | Knewstubb Lake      | Ootsa Deerhorn         |
| NORTH | Nadina           | R   | Knewstubb Lake      | Table Bay              |
| NORTH | Nadina           | R   | Knewstubb Lake      | Tahtsa Reach           |
| SOUTH | Okanagan Shuswap | N   | Shuswap Lake        | Lee Creek              |
| SOUTH | Okanagan Shuswap | N   | Shuswap Lake        | 2 Mile                 |
| SOUTH | Okanagan Shuswap | N   | Shuswap Lake        | Wilson Creek           |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Cayuse                 |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Fosthall               |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Halfway                |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Island Point-Gladstone |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Needles                |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Octopus                |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Renata                 |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Shelter Bay            |
| SOUTH | Selkirk          | R   | Arrow Lakes         | Snag Bay               |

\*\*Log Barge Water Transportation System

| <b>Area</b> | <b>District</b> | <b>Marine (M)<br/>Natural (N) or<br/>Reservoir (R)</b> | <b>Water Body Name</b> | <b>Dump Location Name</b> |
|-------------|-----------------|--|------------------------|---------------------------|
| SOUTH       | Selkirk         | R  | Arrow Lakes            | Stobo                     |
| SOUTH       | Selkirk         | N  | Slocan Lake            | Rosebery                  |
| SOUTH       | Thompson Rivers | N  | Adams Lake             | North end                 |