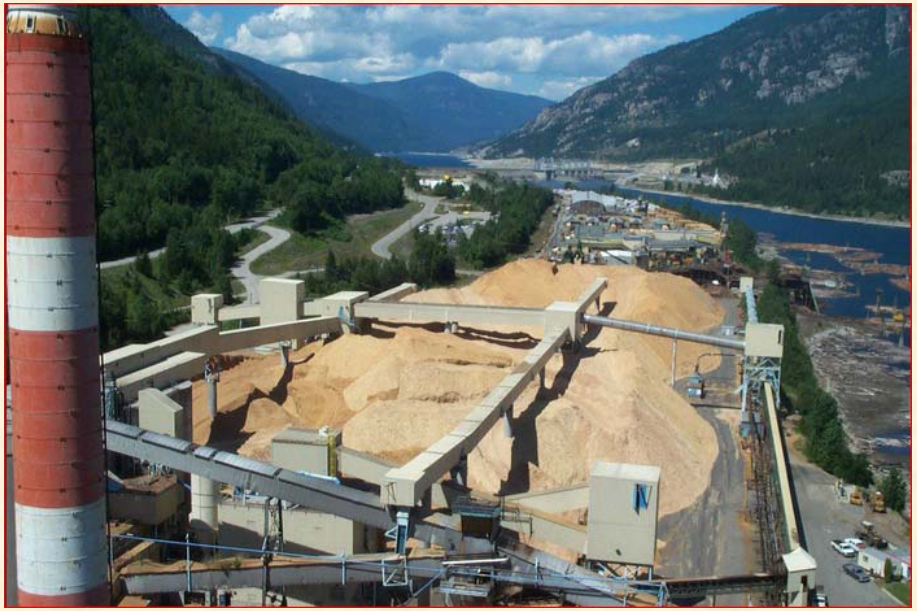
Pre Harvest Waste Assessment Method & Special Forest Products

- The Forestry Fibre Working Group has been working on the Minister's mandate to improve fibre utilization by making fibre more readily available to Secondary Manufacturing Facilities.

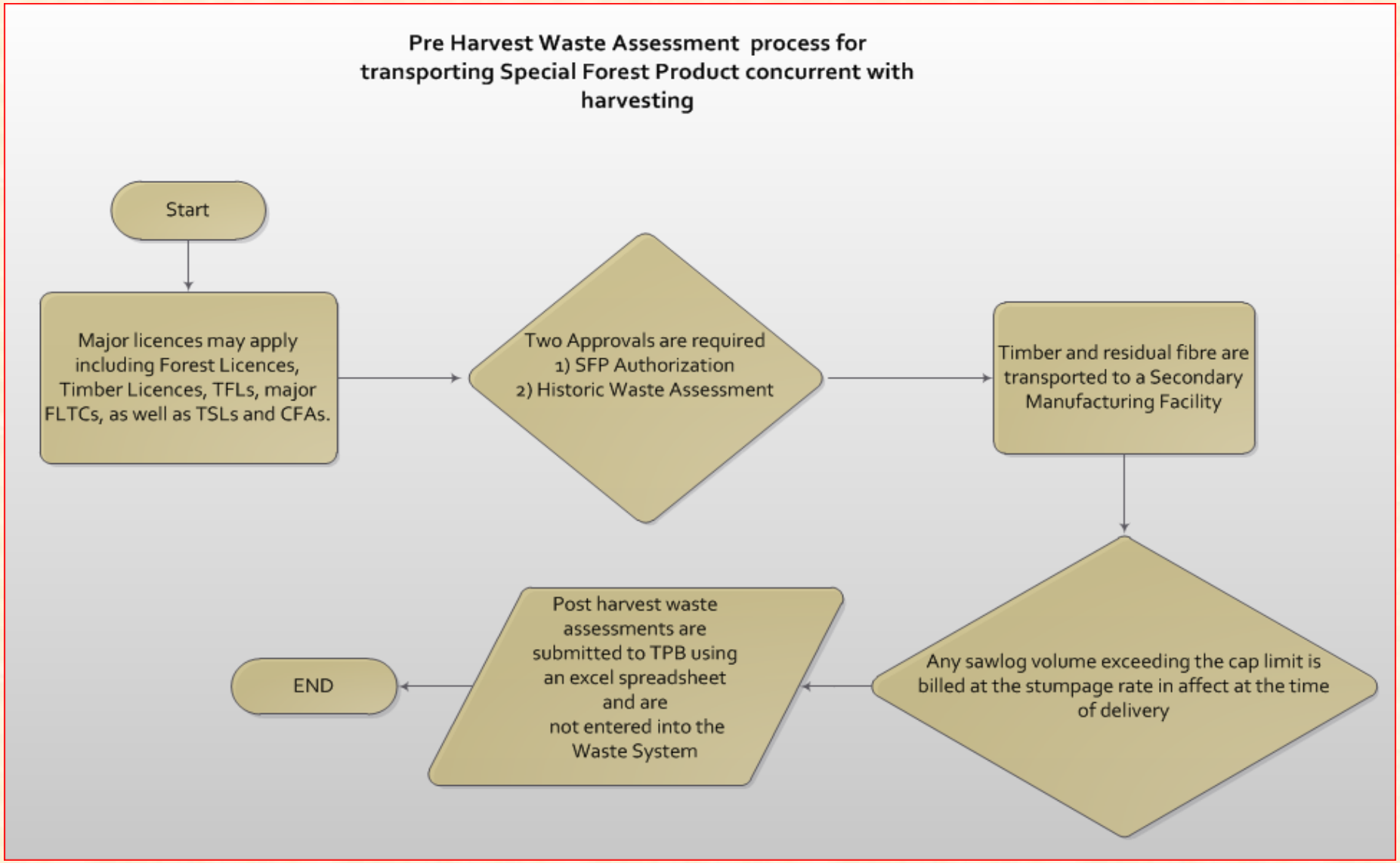
- The Pre Harvest Waste Assessment is being introduced as a mechanism to improve fibre utilization in the Interior.

Celgar Pulp Mill

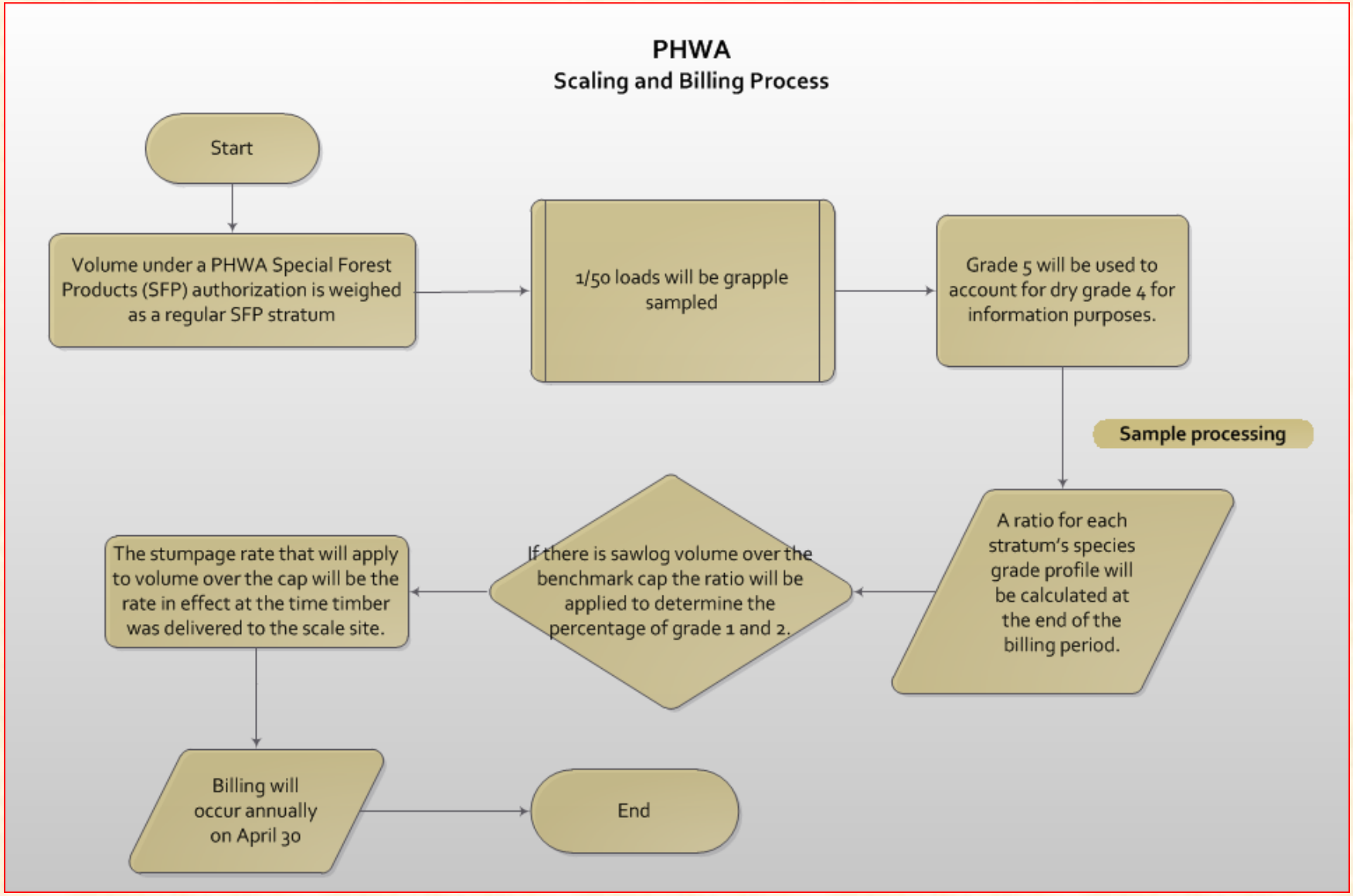


Prepared by:
Shawna Young, RPF
Provincial Residue and Log Salvage
Policy Forester, TPB

PHWA


Pre Harvest Waste Assessment process for transporting Special Forest Product concurrent with harvesting
Start
Major licences may apply including Forest Licences, Timber Licences, TFLs, major FLTCs, as well as TSLs and CFAs.
Two Approvals are required
1) SFP Authorization
2) Historic Waste Assessment
Timber and residual fibre are transported to a Secondary Manufacturing Facility
Any sawlog volume exceeding the cap limit is billed at the stumpage rate in affect at the time of delivery
Post harvest waste assessments are submitted to TPB using an excel spreadsheet and are not entered into the Waste System
END

PHWA


PHWA
Scaling and Billing Process
Start
Volume under a PHWA Special Forest Products (SFP) authorization is weighed as a regular SFP stratum
1/50 loads will be grapple sampled
Grade 5 will be used to account for dry grade 4 for information purposes.
Sample processing
A ratio for each stratum's species grade profile will be calculated at the end of the billing period.
If there is sawlog volume over the benchmark cap the ratio will be applied to determine the percentage of grade 1 and 2.
The stumpage rate that will apply to volume over the cap will be the rate in effect at the time timber was delivered to the scale site.
Billing will occur annually on April 30
End

PHWA

SFP Authorization Conditions:

- Need a SFP authorization to transport and scale timber for the purpose of manufacturing it into SFP.
- Applications will only be accepted for approved cutblocks where no cutting has occurred.
- The historic waste assessment must be approved before timber for SFPs can be transported.
- Identifies the Cutting Authorities, scale sites and secondary manufacturing facilities.

PHWA

SFP Authorization conditions:

- Upon approval of the PHWA SFP authorization the volume will be delivered to a scale site and can't be re-inventoried, sorted or resold.

- Timber can not be manufactured into a product other than a SFP.

- Load description slips must indicate:

  1) it is critical that the exact cut block identifier from the Cutting Permit document is identified on the load description slip in order to track the volume in HBS.

  2) the check box *'other'* is ticked and a statement needs to be made stating that the wood will be manufactured into SFPs.

PHWA

SFP Authorization Conditions:

- Licensees will set up the strata needed to determine the species grade profile above the benchmark cap with Area scaling staff.
- Timber scaled as grade 1 and 2 in excess of the allowable cap limit will be billed at the stand rate in effect at the time of delivery.
- Licensees are required to submit a Post Harvest Waste Assessment to Timber Pricing Branch.
- A District Manager may cancel an authorization at any time for non compliance with its conditions.

PHWA

Summary of the process for filling out the PHWA Volume Calculator using the historic waste information.

Identify the BEC zone and then using the Benchmark and BEC Zone table from Appendix 5 identify whether the zone is within the Dry, Transition or Wet Belt Benchmark zone.

Use the benchmark zone to identify the historic volume/hectare listed in table A-2 in Appendix 7 and enter it into the volume calculator as shown below.

PHWA HWI Volume Calculator														
Block	10		Area (ha)	25.5		Historic m3/ha	10.6		Total m3	270.300	Totals (Information only)			
Cruise Species		Grades												
		1			2			4						
Species	%	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	Grade %	Species m3/ha	Species Vol (M3)
LO	45%	1%	1.216	0	61%	74.197	2.91	38%	46.221	1.81	100%	4.770	121.635
FI	25%	1%	0.676	0.03	33%	22.300	0.87	66%	44.600	1.75	100%	2.650	67.575
Sp	22%	1%	0.595	0.02	65%	38.653	1.52	34%	20.218	0.79	100%	2.330	59.466
AS	8%	1%	0.216	0.01	62%	13.407	0.53	37%	8.001	0.31	100%	0.850	21.624
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
	100%		2.703	0.11		148.557	5.83		119.040	4.66		10.6	270.300

Table A-2 Average Volume/Hectare of Avoidable Waste by District

Area	Region	District		Benchmark Zones		
		Name	Symbol	Dry Belt	Transition	Wet Belt
North	Northeast RNO	Fort Nelson	DFN		4.1	
		Peace	DPC		11.0	12.4
	Omineca ROM	Fort St James	DJA	10.6	7.5	12.6
		Mackenzie	DMK		7.7	7.2
		Prince George	DPG	1.9	7.9	12.4
		Vanderhoof	DVA	3.2	6.0	
	Skeena RSK	Coast Mountain	DKM			83.1
		Nadina	DND	11.5	11.1	14.2
		Skeena Stikine	DSS		15.9	50.0
South	Cariboo RCB	Cariboo Chilcotin	DCC	3.2	6.3	10.6
		100 Mile	DMH	2.6	6.2	6.6
		Quesnel	DQU		5.2	5.9
	Kootenay/ Boundary RKB	Rocky Mountain	DRM	2.7	6.3	4.7
		Selkirk	DSE	5.4	8.0	13.9
	Thompson/ Okanagan RTO	Cascades	DCS	4.2	5.4	5.5
		Thompson Rivers	DKA	9.7	9.3	11.0
		Okanagan Shuswap	DOS	6.2	7.7	11.0

Note: Cells Highlighted — Most likely will not exist within the district.

PHWA

Use the Block Summary page from the cruise compilation to locate the Species % Distribution as highlighted below

*** FOR APPRAISAL PURPOSES ***

BS- 1 , p170

Block Summary

Average Line Method
[redacted]
Licence Number: [redacted] CP: [redacted]
Project: [redacted]

Grades: MOF Computerized
Computerized Decay
Computerized Waste
Computerized Breakage

FIZ: [redacted]
PSYU: [redacted]
Region: [redacted]
District: [redacted]

15-Mar-2011 09:47:21AM
Filename: [redacted]
Compiled by: [redacted]
Cruised by: [redacted]
Version: [redacted] TNRG build [redacted]

Net Area: Block : (M) - 001:1, Plots in Block: 51, TUs: [A : 42.7]
Gross Area: [R/W Removed : 4.3][Reserves : 3.3][Grand Total : 50.3]

		Total	Conifer	C	B	S	PL	L	AC
Utilization Limits									
Min DBH	cm (M)			17.5	17.5	17.5	12.5	17.5	17.5
Stump Ht	cm (M)			30.0	30.0	30.0	30.0	30.0	30.0
Top Dia	cm (M)			10.0	10.0	10.0	10.0	10.0	10.0
Log Len	m			5.0	5.0	5.0	5.0	5.0	5.0
Volume and Size Data									
Gross Merchantable	m3	17435	17396	82	5797	6661	4856		39
Net Merchantable	m3	13911	13899	49	4130	5988	3732		11
Net Merch - All	m3/ha	326	326	1	97	140	87		0
Distribution	%	100	100	0	30	43	27		0
Decay	%	12	12	21	19	7	8		50
Waste	%	4	4	11	7	1	4		18
Waste(billing)	%	5	5	18	10	1	5		63
Breakage	%	5	5	8	2	2	11		4
Total Cull (DWB)	%	20	20	40	29	10	23		72
Stems/Ha (Live & DP)		527.6	525.1	2.8	258.9	138.7	124.7		2.5
Avg DBH (Live & DP)	cm	30.9	30.9	37.3	27.1	36.6	31.2		28.1
Snags/Ha		4.2	4.2		1.0	2.2	1.0		
Avg Snag DBH	cm	37.4	37.4		43.3	29.8	45.2		
Gross Merch Vol/Tree	m3	0.77	0.78	0.68	0.52	1.12	0.91		0.37
Net Merch Vol/Tree	m3	0.62	0.62	0.41	0.37	1.01	0.70		0.10
Avg Weight Total Ht	m	27.7	27.7	18.9	24.5	29.6	29.0		17.9
Avg Weight Merch Ht	m	22.6	22.6	14.7	18.6	24.6	24.2		12.3
Avg 5.0 m Log Net	m3	0.18	0.18	0.16	0.13	0.25	0.18		0.06
Avg 5.0 m Log Gross	m3	0.22	0.22	0.23	0.18	0.27	0.21		0.19
Avg # of 5.0 m Logs/Tree		3.58	3.59	3.00	2.93	4.11	4.41		2.00
Net Immature	%	7.5	7.5		22.1	2.2			
Average Slope	%	40							
LRF and Log Summary									
Net Merch - Stud	%	29.9	29.9		46.0	19.8	28.7		
Net Merch - Small Log	%	71.0	71.0	100.0	81.3	56.8	81.8		100.0
Net Merch - Large Log	%	29.0	29.0		18.7	43.2	18.2		
Avg LRF All	bdft/m3			130.5	165.7	205.5	171.4		138.1
Statistical Summary									
Coeff. of Variation	%	61.3	61.4	714.1	104.4	86.6	142.1		714.1
Two Standard Error	%	17.2	17.2	200.0	29.2	24.2	39.8		200.0
Number and Type of Plots		MP - 51							
Number of Potential Trees		236							
Plots/Ha		1.2							
Cruised Trees/Plot		4.6							

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

CruiseComp Copyright© 1996-2010, TRCO Natural Resource Group Ltd.

PHWA

Enter the % species distribution from the Cruise Compilation into the volume calculator.

Use the Table called “Avoidable Waste Distribution by Grade and Species” from Appendix 7 and enter the values for the species that are in the wet belt zone for the applicable district.

Lodgepole Pine	1	2%	1%	1%
	2	61%	57%	61%
	4	37%	42%	38%

PHWA HWI Volume Calculator

Block	10	Area (ha)	25.5	Historic m3/ha	10.6	Total m3	270.300				Totals (Information only)		
Cruise Species		Grades											
		1			2			4					
Species	%	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	Grade %	Species m3/ha	Species Vol (M3)
LO	45%	1%	1.216	0	61%	74.197	2.91	38%	46.221	1.81	100%	4.770	121.635
FI	25%	1%	0.676	0.03	33%	22.300	0.87	66%	44.600	1.75	100%	2.650	67.575
Sp	22%	1%	0.595	0.02	65%	38.653	1.52	34%	20.218	0.79	100%	2.330	59.466
AS	8%	1%	0.216	0.01	62%	13.407	0.53	37%	8.001	0.31	100%	0.850	21.624
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
	100%		2.703	0.11		148.557	5.83		119.040	4.66		10.6	270.300

PHWA

Once the block area, historic waste %, and species/grade % are entered the Volume by Species is automatically calculated.

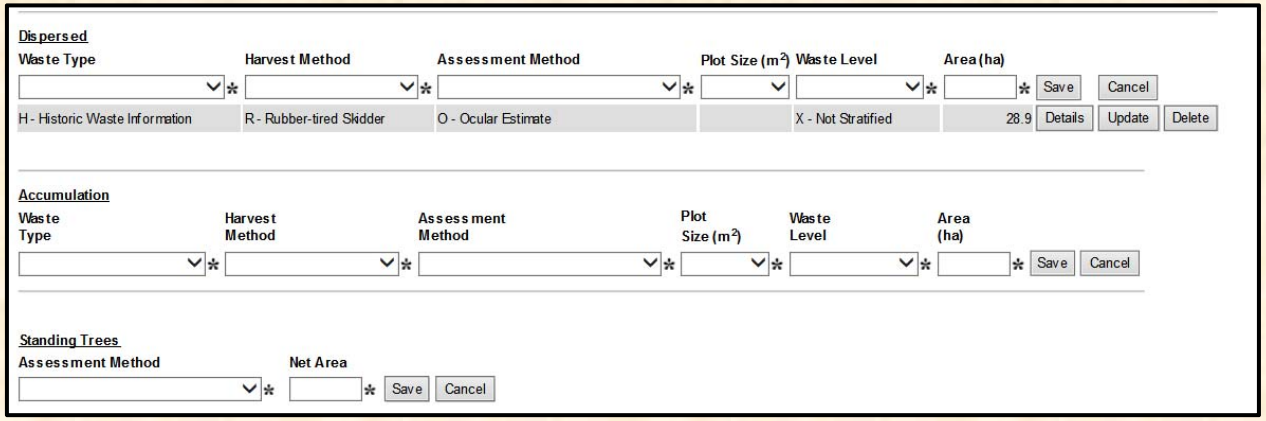
PHWA HWI Volume Calculator													
Block	10		Area (ha)	25.5		Historic m3/ha	10.6		Total m3	270.300	Totals (Information only)		
Cruise Species		Grades											
		1			2			4					
Species	%	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	% Spp	Vol by Spp	m3/ha	Grade %	Species m3/ha	Species Vol (M3)
LO	45%	1%	1.216	0	61%	74.197	2.91	38%	46.221	1.81	100%	4.770	121.635
FI	25%	1%	0.676	0.03	33%	22.300	0.87	66%	44.600	1.75	100%	2.650	67.575
Sp	22%	1%	0.595	0.02	65%	38.653	1.52	34%	20.218	0.79	100%	2.330	59.466
AS	8%	1%	0.216	0.01	62%	13.407	0.53	37%	8.001	0.31	100%	0.850	21.624
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
			0.000	0		0.000	0		0.000	0	0%	0.000	0.000
	100%		2.703	0.11		148.557	5.83		119.040	4.66		10.6	270.300

See the document called “PHWA Waste System Data Entry Steps” for a detailed example of the data entry steps.

PHWA

Once the volume calculator table is filled out the volume per species and grade is entered into the Waste System using the ocular assessment format.

- Licensee submits the Historic Waste Information into the Waste System by creating a unique Reporting Unit and adding the block(s)
- On waste 102 select Historic Waste Information as the waste type



Dispersed

Waste Type	Harvest Method	Assessment Method	Plot Size (m^2)	Waste Level	Area (ha)			
						Save	Cancel	
H - Historic Waste Information	R - Rubber-tired Skidder	O - Ocular Estimate		X - Not Stratified	28.9	Details	Update	Delete

Accumulation

Waste Type	Harvest Method	Assessment Method	Plot Size (m^2)	Waste Level	Area (ha)		
						Save	Cancel

Standing Trees

Assessment Method	Net Area		
		Save	Cancel

PHWA

Enter the volume by species and grade into Waste 205.

Waste205 - Ocular Estimate

Back

Reporting Unit ID:	695	**Forest District:**	DCC - Cariboo-Chilcotin Natural Resource District
Licensee:	TOLKOL 00	**Option:**	Ocular
Dispersed CV (%):		**Accumulated CV (%):**	

Licence No:	A57713	**Cutting Permit:**	31U
Block:	10	**Timber Mark:**	GC231U
WASTE Block Status:	BIS - Billing Issued	**Exempted Block:**	N
Harvest Status:	Complete		
Stratum:	HBOM		

12 rows returned

Piece #	Sp.	Kind	Waste Class	Grade	Estimate (m^3/ha)	Estimate Volume (m^3)		
			A				Save	Cancel
	*	*	*	*				
1	LO	L	A	1	0.0	1.216	Update	Delete
2	LO	L	A	2	2.9	74.197	Update	Delete
3	LO	L	A	4	1.8	46.221	Update	Delete
4	FI	L	A	1	0.0	0.676	Update	Delete
5	FI	L	A	2	0.9	23.300	Update	Delete
6	FI	L	A	4	1.7	44.600	Update	Delete
7	SP	L	A	1	0.0	0.595	Update	Delete
8	SP	L	A	2	1.5	38.653	Update	Delete
10	SP	L	A	4	0.8	20.218	Update	Delete
11	AS	L	A	1	0.0	0.216	Update	Delete
12	AS	L	A	2	0.5	13.407	Update	Delete
13	AS	L	A	4	0.3	8.000	Update	Delete

Back

PHWA

Pilot term

- The PHWA pilot term is effective August 1, 2016 to April 30, 2018 to allow three full logging seasons.
- TPB will calculate and issue a single invoice for all timber scaled above the cap limit annually on April 30.

PHWA

Contacts

North Area

- Chris Shallow, Regional Area Waste Specialist
- Brian Cornelis, Scaling and Billing Manager

South Area

- Debbie Hartland, Regional Area Waste Specialist
- Victoria Groves, Scaling and Billing Manager

Timber Pricing Branch

- Shawna Young, Provincial Residue and Log Salvage Policy Forester
- Keith Tudor, Timber Measurements Manager
- Cynthia Lidstone, A/Provincial Wood Measurement Specialist