

LAKESIDE PACIFIC FOREST PRODUCTS**Fraser TSA**

125,484 M3/Yr

Tuesday, September 12, 2017

A. General Comments

- 1 Minor additions and consolidation in operating areas have not overcome the skew towards the good economic zone.
- 2 Lakeside remains overweight in its opportunity in the old forest profile as compared to the residual TSA.
- 3 Harvest method comparison based on slope is slightly underweight on the 0-30% slope class.
- 4 Overall species distribution is a very close match to the residual TSA.

B. Volume Summary

The AAC for this analysis does not include any First Nation allocation

125,484 M3

C. Unresolved Issues

- 1 Parity towards the economic zonation used in this project.
- 2 Xa'xtsa First Nation have indicated interest in influencing resource management decisions within Tretheway Creek.

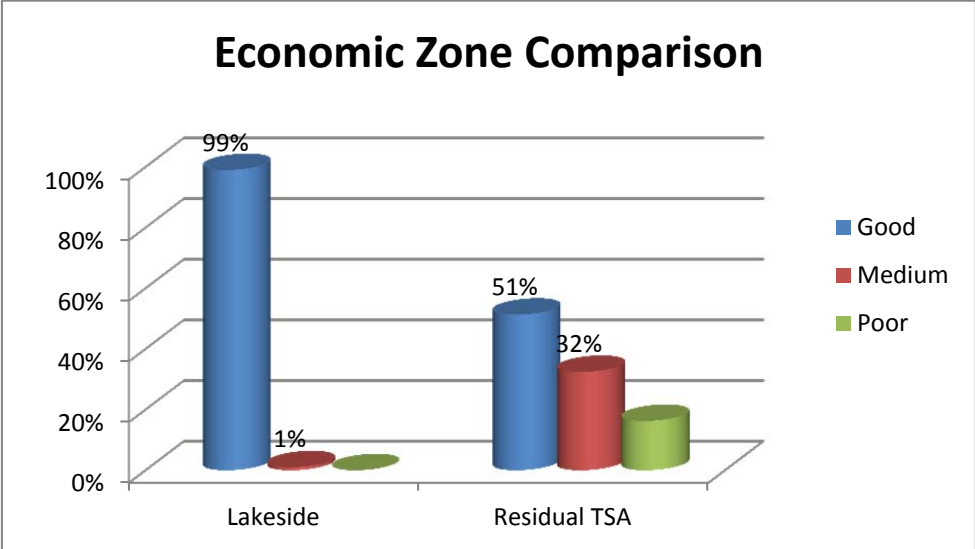
D. Target Volume Position:

	LAKESIDE	Residual TSA
Total THLB Volume:	5,788,253	57,074,507
AAC Estimate	125,484	1,030,449
% of THLB Volume	10%	100%
% of AAC	12%	100%
Years of AAC	46	55
Other Comparisons Requested by Tenure Holders:		
Ave Market Value	\$ 105.46	\$ 99.30
Volume per THLB Ha	499.6	461.8
% old HB>70%	9%	8%

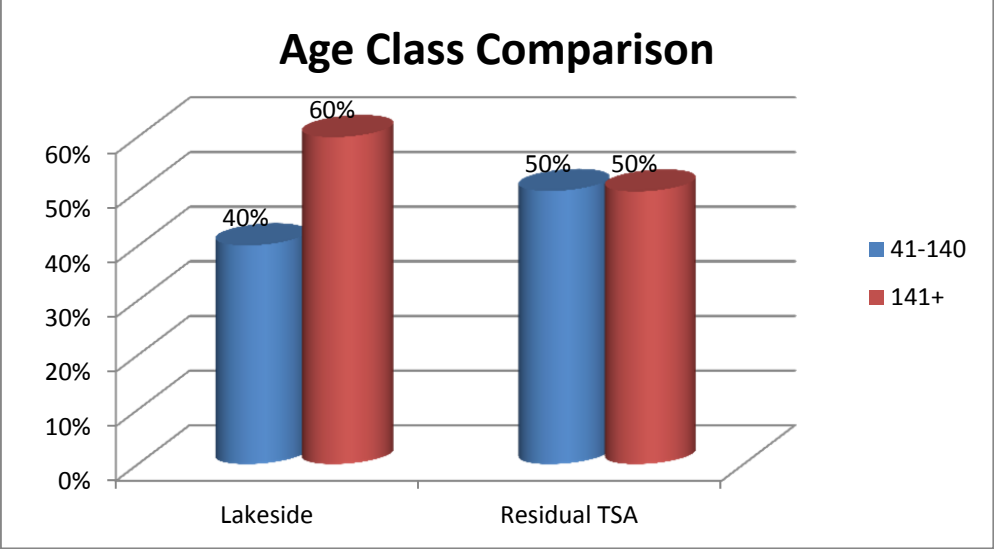
E. Summary:

Lakeside Pacific has not achieved > 50 years of AAC target threshold through this process. While they are below targets the thlb profile is superior in both average market value and volume/thlb ha. The operating area changes and consolidation resulted in a net gain of 130,000 m3 of THLB volume. They continue to be marginally overweight in the Hem-Bal Old Growth on slopes >70% as a result. Any future operating areas expansion should be focussed on the 2nd growth profile on favourable slopes within the moderate or poor economic zones.

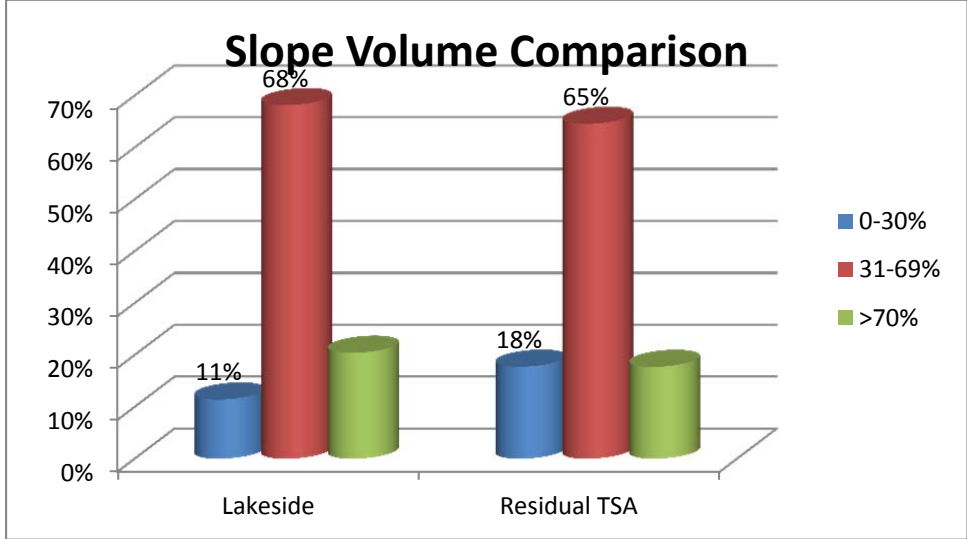
Comparison Graphs - LAKESIDE Operating Area Compared to Residual Fraser TSA



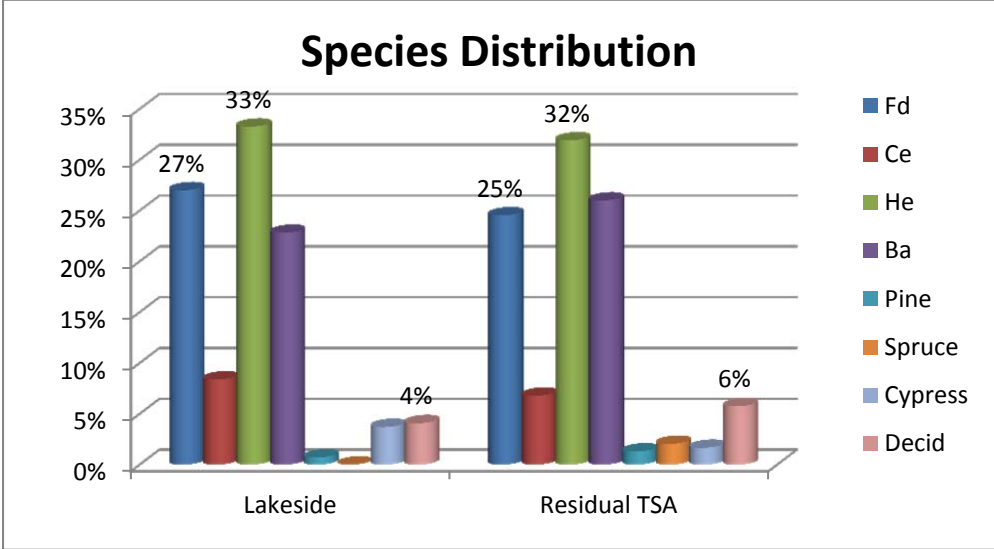
Economic Zone thlb Volume			
	Good	Medium	Poor
Lakeside	99%	1%	0%
Residual TSA	51%	32%	16%



Age Class thlb Volume		
	41-140	141+
Lakeside	40%	60%
Residual TSA	50%	50%



Slope thlb Volume			
	0-30%	31-69%	>70%
Lakeside	11%	68%	20%
Residual TSA	18%	65%	18%



Species thlb Volume Distribution								
	Fd	Ce	He	Ba	Pine	Spruce	Cypress	Decid
Lakeside	27%	8%	33%	23%	1%	0%	4%	4%
Residual TSA	25%	7%	32%	26%	1%	2%	2%	6%

Check
100%

Net change of Version 3 Operating Area as compared to 2015 Benchmark

Change Summary	Total THLB Area Difference +/- from Benchmark	Total THLB Vol	Slope Criteria		
			<30%	31-69%	>70+%
Lakeside Pacific Forest Products					
Good - Economic Zone					
41-140 Years	-178	-201,178	1,159,308	-146,928	33,637
141+ Years	337	331,816	2,025,469	265,432	68,875
Good - Economic Zone Total	160	130,638	3,184,777	118,504	102,512
Medium - Economic Zone					0
41-140 Years	0	4	-19	1	0
141+ Years	0	-3	9,917	-2	0
Medium - Economic Zone Total	0	1	9,897	-1	0
Poor - Economic Zone					0
41-140 Years	0	0	0	0	0
141+ Years	0	0	0	0	0
Poor - Economic Zone Total	0	0	0	0	0
Lakeside Pacific Forest Products	160	130,639	3,194,674	118,503	102,512

check

160

130,639

3,194,674

118,503

102,512

Timber Harvesting Land Base (THLB): Based on Fraser TSA TSR 4 Timber Supply Analysis using a compilation of the best available information.
August 2017 Version 3 - Licensee Operating Area Analysis Forest Cover Data Sources:
Vegetation Resource Inventory: Attributes projected to 2016
Change Detection Mapping: Denudation current to April 2017 using RESULTS forest_cover_inv_svw dataset and Landsat imagery
Burn Severity Mapping: Wildfire V10247 (Cougar Creek) & V10370 (Wood Lake) forest cover updated for Low, Medium & High severity burn

August 1, 2017 Licensee - Economic Zones	Total THLB Area (ha)	Total THLB Vol (m3)	Total Annual Yield (m3/yr)	Slope 0-30 %										Slope 31-69 %										> 69%												
				Slope THLB	THLB Volume (m3)							Slope THLB Volume m3	Annual Yield	Slope THLB	THLB Volume (m3)							Slope THLB Volume	Annual Yield	Slope THLB	THLB Volume (m3)							Slope THLB Volume	Annual Yield			
					FIR	CEDAR	HEMLOCK	BALSAM	PINE	SPRUCE	CYPRESS				DECIDUOUS	FIR	CEDAR	HEMLOCK	BALSAM	PINE	SPRUCE				CYPRESS	DECIDUOUS	FIR	CEDAR	HEMLOCK	BALSAM	PINE			SPRUCE	CYPRESS	DECIDUOUS
Lakeside Pacific Forest Products																																				
Good																																				
41-140 Years	6,760	2,319,765	30,592	1,035	156,838	34,226	87,535	52,741	6,301	0	1,686	46,492	385,819	4,731	4,746	699,503	149,292	431,634	157,825	28,461	0	9,321	156,979	1,633,015	21,251	979	151,748	18,674	73,574	36,048	1,736	0	1,118	18,033	300,932	4,611
141+ Years	4,800	3,450,780	20,415	375	31,614	10,455	100,968	102,774	777	0	22,594	2,999	272,181	1,686	3,174	361,787	146,580	876,526	766,377	3,091	81	135,436	10,263	2,300,140	13,659	1,251	161,919	126,065	349,140	196,941	370	345	41,975	1,704	878,459	5,070
Good Total	11,560	5,770,545	51,007	1,411	188,452	44,681	188,503	155,514	7,078	0	24,280	49,491	657,999	6,417	7,920	1,061,290	295,872	1,308,159	924,202	31,552	81	144,757	167,242	3,933,155	34,909	2,229	313,668	144,739	422,714	232,988	2,106	345	43,093	19,737	1,179,391	9,681
Medium																																				
41-140 Years	0	60	1	0	0	0	10	31	0	0	0	0	41	1	0	0	0	5	14	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0
141+ Years	26	17,647	114	4	0	120	1,184	988	0	0	239	0	2,530	19	17	0	80	4,418	5,923	0	0	2,026	0	12,447	76	4	0	2	1,169	1,078	0	0	422	0	2,670	19
Medium Total	26	17,708	115	5	0	120	1,194	1,019	0	0	239	0	2,571	20	17	0	80	4,423	5,937	0	0	2,026	0	12,467	76	4	0	2	1,169	1,078	0	0	422	0	2,670	19
Poor																																				
41-140 Years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
141+ Years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Poor Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lakeside Pacific Forest Products Total	11,586	5,788,253	51,122	1,415	188,452	44,802	189,697	156,533	7,078	0	24,518	49,491	660,571	6,437	7,937	1,061,290	295,953	1,312,582	930,139	31,552	81	146,783	167,242	3,945,621	34,985	2,234	313,668	144,741	423,883	234,066	2,106	345	43,514	19,737	1,182,061	9,699
Lakeside HB Old >70% 548,327																																				
Residual TSA																																				
123,579	57,074,507	504,598	22,405	2,386,056	632,253	2,965,440	2,515,389	158,785	332,649	110,617	1,020,192	10,121,380	90,264	81,315	8,884,561	2,270,328	11,670,255	10,194,944	523,773	787,622	617,496	1,900.58	36,849,560	332,780	19,859	2,736,092	972,868	3,579,996	2,130,710	57,285	49,341	218,877	358,397	10,103,566	81,554	
			18%	24%	6%	29%	25%	2%	3%	1%	10%	100%		66%	24%	6%	32%	28%	1%	2%	2%	0%	100%	66%	16%	27%	10%	35%	21%	1%	0%	2%	4%	100%	16%	

RESIDUAL FRASER TSA PROFILE				Species Distribution		
Economic Zone				Species	Volume	% Dist.
Good				Fd	14,006,709	25%
41-140 Years				Ce	3,875,448	7%
141+ Years				He	18,215,691	32%
Good Total				Ba	14,841,044	26%
Medium				Pine	739,842	1%
41-140 Years				Spruce	1,169,611	2%
141+ Years				Cypress	946,990	2%
Medium Total				Decid	3,279,171	6%
Poor				Check	57,074,507	100%
41-140 Years						
141+ Years						
Poor Total						
Check						

Total Age Class			Slope Criteria		
41-140 years	28,563,473	50%	0-30	10,121,380	18%
>140+ years	28,511,034	50%	31-69	36,849,560	65%
Check	57,074,507		>70+	10,103,566	18%
			Check	57,074,507	

Timber Harvesting Land Base (THLB): Based on Fraser TSA TSR 4 Timber Supply Analysis using a compilation of the best available information.

Benchmark 2015 - Licensee Operating Area Analysis Forest Cover Data Sources:

Vegetation Resource Inventory: Attributes projected to 2014

Change Detection Mapping: Denudation current to April 2014 using RESULTS forest_cover_inv_svw dataset and Landsat imagery

Benchmark 2015 Licensee - Economic Zones	Total Summary					Slope 0-30%										Slope 31-69%										Slope >69%										
	AAC (m³)	Yrs Supply	Total THLB Area (ha)	Total THLB Vol (m³)	% Total Vol (m³)	Slope THLB Area (ha)	THLB Volume (m3)							Slope THLB Volume	Slope THLB Area (ha)	THLB Volume (m3)								Slope THLB Volume	Slope THLB Area (ha)	THLB Volume (m3)								Slope THLB Volume		
							FIR	CEDAR	HEMLOCK	BALSAM	PINE	SPRUCE	CYPRESS			DECID	FIR	CEDAR	HEMLOCK	BALSAM	PINE	SPRUCE	CYPRESS			DECID	FIR	CEDAR	HEMLOCK	BALSAM	PINE	SPRUCE	CYPRESS		DECID	
Lakeside Pacific Forest Products	125,484	45.1																																		
Good - Economic Zone																																				
41-140 Years	20		6,937	2,520,943	45%	1,154	221,879	44,503	112,527	41,220	7,162	0	1,192	45,224	473,706	4,924	812,954	169,193	468,468	151,208	23,867	0	8,713	145,539	1,779,943	860	139,771	16,288	63,309	30,168	1,206	0	1,026	15,524	267,294	
141+ Years	25		4,463	3,118,964	55%	397	50,117	11,359	98,145	91,146	780	0	20,454	2,670	274,672	2,904	396,714	129,579	759,948	626,336	2,750	0	109,454	9,927	2,034,708	1,162	155,102	121,552	316,027	174,583	983	0	39,659	1,678	809,584	
Good - Economic Zone Total	45		11,400	5,639,907	100%	1,551	271,996	55,862	210,672	132,366	7,942	0	21,646	47,894	748,378	7,828	1,209,669	298,772	1,228,416	777,544	26,617	0	118,167	155,466	3,814,650	2,021	294,873	137,840	379,336	204,751	2,190	0	40,685	17,203	1,076,878	
Medium - Economic Zone	0				0%																															
41-140 Years	0		0	57	0%	0	0	0	10	29	0	0	0	0	39	0	0	0	4	14	0	0	0	18		0	0	0	0	0	0	0	0	0	0	
141+ Years	0		26	17,651	0%	4	0	120	1,184	988	0	0	239	0	2,531	17	0	80	4,419	5,923	0	0	2,027	0	12,450	4	0	2	1,169	1,078	0	0	422	0	2,670	
Medium - Economic Zone Total	0		26	17,707	0%	5	0	120	1,193	1,017	0	0	239	0	2,569	17	0	80	4,423	5,937	0	0	2,027	0	12,468	4	0	2	1,169	1,078	0	0	422	0	2,670	
Poor - Economic Zone	0				0%																															
41-140 Years	0		0	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	
141+ Years	0		0	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	
Poor - Economic Zone Total	0		0	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	
Lakeside Pacific Forest Products Total			11,427	5,657,614	100%	1,556	271,996	55,983	211,865	133,383	7,942	0	21,885	47,894	750,947	7,845	1,209,669	298,853	1,232,839	783,481	26,617	0	120,194	155,466	3,827,118	2,026	294,873	137,843	380,505	205,829	2,190	0	41,107	17,203	1,079,549	

Weighted Average Market Value of THLB Volume Position

5,788,253

Source 3month Vancouver Log Price

LAKESIDE PACIFIC

Residual TSA Volume Total

5,788,253

Species	%	Volume	\$/m3	Total Value
Fi	27%	1563410	\$ 164.86	\$ 257,743,739.56
Ce	8%	485495.7	\$ 232.55	\$ 112,902,031.24
He	33%	1926161	\$ 58.68	\$ 113,027,137.78
Ba	23%	1320738	\$ 58.68	\$ 77,500,917.94
Pine	1%	40735.8	\$ 49.15	\$ 2,002,164.62
Spruce	0%	425.9012	\$ 64.88	\$ 27,632.47
Cypress	4%	214816.1	\$ 122.81	\$ 26,381,562.82
Dec	4%	236470.1	\$ 88.11	\$ 20,835,379.18
<i>Check</i>		5788252.8		\$ 610,420,565.61
			AMV	\$ 105.46

TSA Total

Species	Value	% Dist.
Fd	\$ 164.86	25%
Ce	\$ 232.55	7%
He	\$ 58.68	32%
Ba	\$ 58.68	26%
Pine	\$ 49.15	1%
Spruce	\$ 64.88	2%
Cypress	\$ 122.81	2%
Decid	\$ 88.11	6%
<i>Check</i>		57,074,507
		AMV \$ 99.30