

100 Mile House Timber Supply Area – Non Saw Log Volume Estimate

August 8, 2019

Background:

The 100 Mile House Timber Supply Area (TSA) currently has a significant volume of fibre available outside of the profile that would be considered for saw log production. This volume is identified as an opportunity to support forest sector investment and jobs in the community. The information in this summary is compiled from projections and estimates based on the best information available and should not be considered an absolute. Many of the opportunities identified below will require proponents to acquire the necessary licencing either through purchase agreements or through a competitive tender. In addition to this much of the fibre will come from existing industrial operations and may require business to business agreements with the various tenure holders across the TSA.

The current fibre opportunities have been sorted into four groups which include; Residual Fibre from Primary Harvest Operations, Non-Saw log Fibre from 2017 2018 Fires, Fibre from Fuel Reduction Treatments, Fibre from Dry Belt Douglas fir Stand Resiliency Treatments.

Residual Fibre from Primary Harvest Operations:

Based on the results of the 2014 and 2015 fibre studies, we have an understanding of the levels of residual logging fibre not currently being utilized. The 2015 scale based samples likely are the most representative samples to quantify the residual logging fibre we expect to see going forward. The average volume piled for burning was 53m³/ha. This represents approximately 20% of the cruise volume of the blocks sampled. Approximately 9m³ of this volume was in a log form (>3m in length), the majority of the volume measured was in chunks as a result of bucking waste. The bucking waste is as a result of sweep that commonly occurs in Dry belt Douglas fir stands and log merchandizing practices to maximize value. The proportion of logs within the residual logging fibre is expected to increase as Norbord was purchasing fibre (logs) at the time of this study. The following table illustrates the estimated annual non-saw log fibre available from logging residuals based on the 2015 scale based samples.

Fibre Category	Volume/ha (m ³)	Total TSA Residual Volume based on 20% of current AAC	Total TSA Residual Volume based on 20% of estimated mid term AAC*
Logs	9.3	33,680	27,840
Chunks	44.1	159,881	132,160
Total	53.4	193,561	160,000

*AAC in the 100 Mile TSA is expected to drop after next Timber Supply Review (approx. 2 years)

The above table does not account for volume available from Area Based Tenures or harvesting on private land within the 100 Mile District. An additional 10% volume could reasonably be expected to contribute to the available fibre from Area Based Tenures and private land on an annual basis (176,000m³/yr total).

Non-Saw log Fibre from 2017 2018 Fires:

A recent analysis has been completed to identify the potential total salvageable volume resulting from the 2017 and 2018 wildfires. Steep slopes, low volume stands, stand level retention, and no harvest areas have been removed from the potential harvest volume. Additionally, volume has been netted down based on burn severity. As the majority of damage occurred within Douglas fir types where partial cut harvesting techniques are appropriate, licensees have been directed to retain green trees where present. The following net downs have been used to determine total available burn volume.

Fir Leading Types

High Severity – 90% harvest

Moderate Severity - 50% harvest

Low Severity - 20% harvest

Spruce Leading Types

High Severity – 100% harvest (scattered green will also have to be harvested)

Moderate Severity – 50% harvest (focus on patches of high mortality and retain areas with more green)

Low Severity – 0% (No harvest opportunity, these areas will likely be retained for habitat and hydrology)

All pine leading types were removed from the total available volume. These stands were dead prior to the fire and fully consumed by the fire.

The following table shows the estimated total available fire salvage volume.

	Fir Volume (m3)	Spruce Volume (m3)	Total Volume (m3)
2017 and 2018 fires – potential salvage volume	2,560,913	310,450	2,871,363
Estimated saw log salvage by summer 2020	1,300,000	-	1,300,000
Remaining non saw log burned volume (not salvaged)	1,260,913	310,450	1,571,363

Fibre from Fuel Reduction Treatments:

Potential volume in Fuel Reduction Polygons has been estimated from 2018 VRI data. Fir leading types have assumed a 30% harvest of merchantable volume and pine or spruce types have assumed an 80% harvest. In fir leading types, thinning from below will be used to create a shaded fuel break whereas pine and spruce types will require a more aggressive treatment to adequately create a fuel break. The following table illustrates the potential available fibre as a result of fuel reduction treatments.

	Fir volume (m3)	Pine volume (m3)	Spruce volume (m3)	Total volume (m3)
Interface Fuel break	19,686	5,230	18,515	43,431
Landscape Fuel break	42,439	14,401	26,899	83,739
Total	62,125	19,631	45,414	127,170

Fibre from Dry Belt Douglas fir Stand Resiliency Treatments:

The opportunity in Dry Belt Douglas fir stand resiliency treatments will be the most difficult volume to realize. These are low volume stands, where a thinning treatment will be utilized to harvest small diameter and lower quality trees. Based on an estimated 30% volume removal, the following table illustrates the potential volume.

Mule Deer Winter Range	Hectares	Average vol/ha	Total Volume	30% Removal
Y	8,767.4	40.7	359,323	107,797
N	704.9	45.9	34,008.5	10,202
Total	9,472.3	41.2	393,331.5	117,999

Non-Sawlog Licences in place as of January 2020:

There are two bioenergy Non Replaceable Forest Licenses (NRFL) that have been awarded but are currently inactive. These licenses are intended to salvage dead conifer no longer viable as sawlog production.

- A84795 - 50,000m3/year, expires Dec 31, 2024, held by Pioneer
- A84592 – 235,000m3/year 2020 - 2024 then 230,000/year to expiry Dec 31, 2025, held by Norbord

Norbord also holds one deciduous NRFL, A93486, 30,000m3/year, expires December 31, 2025

Conclusion:

Based on the above summary, the 100 Mile Natural Resource District has an estimated 1,816,532m³ of potential non saw log fibre opportunity in all categories plus an estimated 176,000m³/year of residual logging fibre which could be made available and or accessed through business to business agreements to support new forest sector investment in the community.