

Tire Stewardship B.C.
BOARD MEETING & STRATEGIC PLANNING SESSION

Day 1: July 5, 2022

9.00am to Noon

Sallas Room Sidney Pier Hotel (guests via Zoom)

Final Minutes

Appendices: Presentations

In Attendance:

TSBC Board

Glen Ringdal, Glenn Maidment, Ken Rees, Mark Endersby, Norm Schmidt, Adrian Courtenay, Tim Hollett

TSBC Program Administrator & Staff

Rosemary Sutton, Joji Ishikawa,

1. Call to Order & Chair's Opening Remarks @9:00 am

- An update was provided regarding challenges in dealing with the ministry such as the director of the branch's local government background shaping the favoured treatment of local government. The stewards have engaged legal counsel as they feel the director, as the statutory decision maker, is overstepping his bounds by pursuing a "producer paying the cost" phrase in the regulation to the favour of local government and private depot operators. The ministry is also chronically understaffed, and the remaining staff are generally "newbies."

2. Scope 3 Consulting – Life Cycle Analysis (LCA) BC report (Brandon Kuczenski)

- It was noted that an updated version 2.2 was presented rather than the earlier 2.1 that was distributed prior to the meeting. The updated version incorporated the latest comments from the review panel. The key change was that the benefit of TDF relative to coal was not as beneficial as calculated earlier but it still has a net positive environmental benefit. The consensus was that the study will be useful in promoting and reinforcing the message that recycling scrap tires is good for the environment and that TSBC is doing a good job. Potentially, the scope of the study could be expanded to include the impacts if the tires were not collected and to also look further downstream at end of life of the recycled products such as recycled rubber mats.
- It was also noted that TDF makes up about 43% of the end use of scrap tires in the US whereas it is about 6-7% in Canada. Rubberized asphalt also shows promise, and the benefit grows as the projected reduction in maintenance increases. If fibre can be used in non TDF markets, the environmental benefits would be greater.

Action Item(s):

- *Send the updated 2.2 version of the LCA to the board when available. (Rosemary Sutton)*

3. Tire & Rubber Association of Canada / Pirelli – Trends in Tire Manufacturing (Maureen Kline)

- In general, tire manufacturers such as Pirelli are looking to minimize the environmental impacts across the life cycle of the tire from sourcing of materials, production, and end of life but most of the environmental impacts are from the "use" phase, while the tires are on the car. Some improvements in the "use" phase include a focus on lower rolling resistance, and particulate emissions. Sourcing alternative "sustainable" materials such as recyclable carbon black or Russian dandelion, among others are aimed at minimizing environmental impacts. Pirelli was the first tire manufacturer to use natural rubber and rayon certified to the standards of the FSC (Forest Stewardship Council) NGO.
- Canada is waiting for the US to finalize its tire labelling but may decide to follow the European model beforehand for labelling a tire's energy efficiency / rolling resistance.

- Tire manufacturers are also focused on replacing “toxic chemicals” such as 6PPD, found mostly in the synthetic rubber and used to make a smooth tire surface, from the makeup of the tires with alternatives and working, via USTMA and TRAC, with non profit organizations such as “The Ray”, based in Georgia, on sustainable transportation projects such as the use of RMA (rubber modified asphalt) on roads. RMA has several benefits including increased safety in winter driving and the rain by reducing hydroplaning, better drainage, less expensive than traditional polymer modified asphalt, quieter, less rolling resistance, and less abrasion / tire particulates being released with more of the 6ppd being ‘encased” within the RMA rather than leaching into groundwater. The University of Missouri’s “state of knowledge” study summarizes much of the research on RMA to date.
- Research is being done on capturing tire particulates using stormwater infiltration galleries which use crumb rubber to capture the particulates. It was also noted that in the UK, technology is being developed to capture tire particulates at the wheel level.
- It was noted that one potential reason that the 6PPD appears to be impacting coho salmon, but not other species may be related to coho migrating later in the year when there is more rain and runoff.
- Any inquiries related to 6PPD, or tire particulates are referred to Carol Hochu at TRAC.
- It was noted that the Scope 3 Consulting LCA study focused more on the environmental impacts of replacing “regular asphalt” and the potential for reduced road maintenance with RMA rather than RMA’s other benefits.
- While tire manufacturers generally work independently on their own tire composition formulations, some tire manufacturers such as Bridgestone have worked with tire recyclers such as Liberty on the recyclability of the resulting scrap tire. It appears that new tire innovations such as self-sealing tires, sensors and noise reducing foam in tires can all be recycled for now and likely for at least the next 5 years.
- However other innovations such as the tweel and other “airless” tires may present a greater challenge for current tire recycling technology.
- It was noted that it would be beneficial to have organizations such as TRAC, USTMA, Liberty and perhaps others such as LCA experts “in the same room” to share their research and findings rather than everyone working in “silos.”

Action Item(s):

- *Ask Maureen Kline for the comprehensive University of Missouri State of Knowledge RMA report that outlines its many benefits. (Rosemary Sutton)*
- 4. Liberty Tire Recycling – The Path Forward (Thomas Womble, Neil Bansal, Amy Brackin)**
- Thomas Womble introduced Liberty Tire Recycling while Amy Brackin provided updates on RMA, sustainability and Environmental, Social and Governance (ESG) and R&D. Neil Bansal provide an update on BC operations.
 - Some highlights are that Liberty have forty-two facilities, and annual collect about 200M tires and reclaim 3B lb of rubber, diverting it from landfills. The recent acquisition in WA state is an important piece of the general strategy to move towards vertical integration and manufactured products. It was noted that Liberty reinvests a substantial amount of free cash flow back into the business rather than taking dividends.
 - Liberty thanked TSBC for being a catalyst and pushing WRP to find markets for all tire components such as fibre and wire rather than just crumb and mulch. Liberty is using this approach across its other facilities.
 - It was noted that consumers are willing to pay a premium for sustainable products and that Liberty has focused on sustainability from the beginning. Liberty is in step with large tire manufacturers who have declared ambitious ESG goals and are partnering with recyclers that provide research and technology solutions. Liberty is looking at providing feedstock for evolving

pyrolysis opportunities and pursuing markets such as rubberized asphalt and providing carbon black for graphene production.

- It was noted that Liberty's handprint of saving about 943k CO₂-e far exceeds its footprint of about 138k CO₂-e by a multiplier factor of about seven times for a net benefit to the environment.
- Liberty launched its inaugural ESG report on earth day in April 2022. Liberty's ESG commitments include: 98% disposal free system, 25% decrease of Liberty specific carbon footprint by 2025 and reaching 25% post-consumer recycled content in all packaging by 2025, reducing fuel consumption in operations by 10% by 2025, increasing energy productivity by 20% by 2025 and annual goal of zero lost time incidents for employees. Some ways to reach these commitments include possible use of electrified vehicles, route optimization, and energy efficiency analysis such as WRP will undertake with BC Hydro.
- Liberty is conducting two RMA projects in BC and was chosen to be part of a test track study at Auburn University along with other projects in Michigan and Colorado, so Liberty is making inroads in the RMA market.
- Liberty is also continuing to work with Atlantis to commercialize the use of tire fibre in applications maintaining infrastructure such as buildings, pavement, and bridges.
- Liberty also monitors the latest research and studies related to tires and tires components such as PFAS, 6PPD-Q and microplastics and supports efforts of organizations such as USTMA.
- BC operations highlights in 2021 include: safety measure resulting in lower surcharges and insurance premiums, collecting and processing about 55k tonnes of scrap tires and selling into various markets, recycling over 100 m tires to date, COVID outbreak free continuous operations, and investing about \$1.6M in facility improvements.
- 2022 facility updates include renewing leases for 5 years for both facilities, 2 years for both yards, and planning to spend about \$1.2M in health and safety related facility improvements. Due to the extremely uncertain environment, no firm decision has been made regarding the long-term strategy for the facilities, but WRP will continue to evaluate options to reduce cost, increase efficiency, and bring manufacturing to BC.
- 2022 operations to date have seen strong crumb sales in the first 6 months but expecting softness for the second half of the year. Mulch has been off to a slow start but is expected to pick up by YE. Tire wire and Fibre have been strong and expected to stay strong. Employee recruitment and retention continues to be a huge challenge. It was noted that WRP can shift its production to meet market demand which has been helpful.
- WRP also carries a significant inventory of parts and supplies to avoid any possible production delays. Collection continues to be a huge challenge with limited equipment availability, driver shortages, highway washouts and rising costs in all sectors. WRP is evaluating whether to add more truck and trailers to its collection fleet while Liberty HO is investigating use of Electric Vehicles and have initiated a case study to open a collection and shredding facility in Prince George (PG). Securing outbound trucking is more challenging than inbound. WRP is booking transporters when available and shipping product ahead of time to warehouses and working with other Liberty sites to move products to customers. WRP has hired a consultant who starts Sept 1 and will be looking at the existing model and see if there are opportunities for improvements.
- WRP's request to TSBC includes further adjusting the Transportation Incentive (TI) to help overcome challenges and a possible increase in Processing Incentive (PI) while WRP continues to evaluate consolidation cost reduction and efficiencies measures and to include non program OTR into the program. It was noted that the current TI model appears to have caught up to recent inflationary pressures and has resulted in a 7.3% TI rate increase effective July 1, 2022, and that TSBC has sent a letter to the Ministry of Environment and Climate Change Strategy advising them of TSBC's intentions.

- The board's consensus was to keep working together with WRP in finding solutions and overcoming challenges together. Thomas thanked TSBC for its support and partnership and logged off the call along with Amy and Neil.
- It was noted that Liberty can raise tipping fees in the US to help fund its operations but is not able to do that in BC. It was also noted that if WRP were to open shredding operation or volume reduction facility in PG it would not be required to be registered a processor site.
- The consensus was that the board should focus on what it can control and that having the three presentations back-to-back was a useful format and that TSBC can play a role in "connecting the dots" that the separate groups are working on such as RMA.

Action Item(s):

- *Send the TI increase % from July 1, 2021, to July 1, 2022, to Neil Bansal to share with the haulers. (Rosemary Sutton)*

5. **Adjourn-** the meeting was adjourned at 12:42 pm

MINUTES APPROVED:

TSBC DIRECTOR

SIGNATURE

PRINT NAME

DATE

Glen Ringdal

Glen Ringdal

Dec. 13/22