

Off the Road (OTR) Tire Recycling Program FEASIBILITY STUDY AND STAKEHOLDER DIALOGUE

Final Report

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INTRODUCTION

In 2019 Recycle NB received support from the Environmental Trust Fund to conduct a feasibility study and a stakeholder dialogue into Extended Producer Responsibility (EPR) recycling programs for Off the Road Tires (OTRs). For the purposes of this study, OTRs are defined as tires from the agricultural, industrial, forestry, and construction sectors that are currently not included in the New Brunswick tire recycling program.

Forty people were interviewed for this study. All New Brunswick interviews, save one, were conducted in person. The Toronto interviews were held in person, and those for other provinces were conducted by phone. A standard questionnaire was developed for the interviews with recycling agencies in other provinces, and separate ones were developed for New Brunswick stakeholders. A complete list of the people and organizations interviewed for this study can be found in Appendix A.

MANDATE

My mandate was to research and document OTR recycling from four perspectives:

- How do other Canadian provinces recycle OTRs?
- What do industry representatives, including the major OTR dealers in New Brunswick, think about an Extended Producer Responsibility (EPR) recycling program for OTRs?
- How might impacted parties, such as consumers of OTRs, react to such a program?
- How could OTRs be recycled in New Brunswick?

The answers to these four questions represent the major sections of this report.

Extended Program Responsibility (EPR) is an environmental policy approach in which the producer's responsibility for reducing environmental impacts and managing the product is extended across the whole life of the product. It's a cradle-to-grave approach to managing materials.

Recycling programs vary from province to province. Government regulations use different definitions for key elements of the program and the extent to which the eco-fee is transparent to the customer is not consistent across the country. The Canadian Association of Tire Recycling Agencies (CATRA) is the best source of standardized information regarding what type of tires are included in provincial recycling programs. A handy summary is provided by CATRA in their document, "Canada's Tire Recycling Fees by Province / By Tire Type," which I include in Appendix B. I have done my best to be consistent with the terms used in this report, while using accurate language when describing a particular program.

This mandate was limited in scope; as such, there were a number of limitations to the study. I want to acknowledge these upfront, alongside the corrective measures I undertook to mitigate them. While the standard survey designed for the interviews with provinces had its advantages (namely consistency), relatively short (about one-hour) phone conversations are a less-than ideal method of gathering information on complex and diverse programs. My work was therefore supplemented by research from other sources.

The scope of the study also precluded me from interviewing farmers, road builders, mining operations, or forest harvesters. Rather, information was gathered from industry associations representing these groups. In three instances, I asked the industry association to survey members or to collect more information, which provided greater validity to the information gathered. Broader consultations with users of OTRs will be needed in the next stages and will be addressed in the report's findings.

After receiving my mandate, I learned that both the Department of Environment and Local Government and Tire Dealers in New Brunswick had done a considerable amount of work on recycling OTRs between 2009 and 2012. This information was not initially incorporated in my work plan, but it quickly became apparent that I could not ignore this previous work. Some of the tire dealers even expressed frustration that they were "starting all over again." I have therefore incorporated some of the most relevant information from previous efforts in the report, and I will use this as a launching pad for my discussion of the next steps that might be undertaken by the government, should it wish to proceed with recycling OTRs.

THE TIRE RETAIL SECTOR IN NEW BRUNSWICK

Six of the biggest OTR tire dealers in New Brunswick, spread among the four corners of the province, were identified by the Atlantic Tire Dealer Association (ATDA), through Recycle NB. I visited each of them at their place of work. They sell all types of OTRs, though their clientele reflects the most active sectors in each of their respective regions. For instance, a nearby community or mine impacts the types of OTRs they sell. For them, the lack of a standard recycling program for OTRs is a significant problem.

There were stockpiles of OTRs in each location. They are bulky, cumbersome, and pose a fire hazard. Safety risks also arise from the stagnant water in OTR sites, which often serve as a breeding ground for insects and rodents.



There is no consistent policy on the redemption of used OTRs, but each of the studied dealers will do so for good clients. Some charge for this service, but the price range is not consistently applied across the province, or even within a particular store. For all but one dealer, the disposal of used OTRs comes at a significant cost. One dealer processed two large shipments of used OTRs in the last decade–each cost his business \$20,000. One was sent to the Tire Recycling Atlantic Canada Corporation (TRACC) in Minto, when they had the capacity to process OTRs, and the other was sent to a tire retreader. Most dealers can pass used tires to an Irving company that uses OTRs on tugboats and wharfs. Some OTRs also end up buried in landfills in some areas of the province, where they are accepted for a tipping fee.

One of the dealers I visited in Edmundston has an impressive plant, which specializes in retreading and fixing OTRs. An OTR can be retread up to three times. They are then resold to industrial buyers and have their useful life extended by months. This particular dealer also burns the tires in a process called pyrolysis. I will expand on this in a subsequent section which outlines options for recycling OTRs in New Brunswick.

Each dealer sells more tires than they take back, which raises the questions of where the unreturned tires end up. Interestingly, very few end up at provincial landfills. Several dealers believe that they are buried, or that they are thrown into pits, private dumps, or forested areas. This is purely anecdotal information which could not be validated.

Dealers were unanimous in their support for a legislated, industry run, EPR recycling program for OTR tires. Each forcefully voiced the opinion that the recycling fee should be visible on the invoice at the point of sale and collected by the tire dealer.

All the dealers and Minto's TRACC also agreed that the fee needs to be calculated according to the weight of the tire, since their size and weight can vary considerably according to the type of OTR.

One of the biggest concerns that were voiced by TRACC relates to the transportation of used OTRs. The processes and equipment for collecting used tires in New Brunswick's current recycling program could not handle the weight and size of several types of OTRs.

All of the tire dealers I met were aware of-and most had participated in-a previous effort on the part of the Atlantic Tire Dealer Association (ATDA), the Tire and Rubber Association of Canada (TRAC), and the TRACC to develop a program to recycle OTRs.

Previous attempts to find a solution to recycling OTRs in New Brunswick

In 2009, a committee of the Atlantic Tire Dealer Association developed a voluntary fee schedule for recycling OTRs in New Brunswick. This initiative was industry-led with the participation of TRACC in Minto. The dealers arrived at a nine-level fee structure based on the weight of OTRs. The prices ranged between \$25.00 for OTRs of up to 250 lb and \$350 for OTRs weighing from 2601 lb to 3000 lb.

The recycling program was developed by dealers, without government assistance. Arrangements were made with TRACC to recycle all large farm, industrial, forestry, and other OTRs, for a fee. In 2009, TRACC installed new machinery and technology to recycle OTRs. Appendix C includes a full description of the program and the fee structure which was provided to me by two different tire dealers.

Dealers also estimated the number of OTRs consumed in New Brunswick based on their actual sales. They believe that these estimates are still valid, given that their sales have remained relatively stable. A 2012 analysis conducted by the Department of the Environment confirms these estimates.¹

Amount of OTRs sold in New Brunswick	
Farm	2,968
Forestry	556
Industrial	14,900
Other OTRs	4,288
Total Tires	22,712
Total Weight	4,041,213 lb

Source: John Corriea, Coast Tire

¹ Documents produced by ELG and provided to the consultant.

In 2009, dealers reported feeling optimistic that a solution had finally been found to permit the recycling of OTRs. They started accepting used OTR tires and charging fees according to the aforementioned schedule. A major glitch quickly emerged, however: this program was voluntary. Not all dealers were consistently charging the fee, and one dealer was signaled out for not charging at all. This was unsustainable in a competitive market, and it led to the program's demise. I believe that the failure of the 2009 attempt contributed to the dealers' willingness to adopt an EPR recycling program based in legislation that creates a level playing field. Most dealers currently have a relationship with TRACC: accordingly, they seemed comfortable with the idea of the TRACC being the processor of used OTRs in New Brunswick.

Shortly following this failed attempt by tire dealers to create their own program, the Department of the Environment began consultations with a variety of stakeholders on a recycling program for OTRs. Broad consultations with major stakeholders (the tire industry and consumers of ORTs) took place. The Department indicated that a program was now possible, following the introduction of the Designated Material Regulation under the Clean Environment Act.

The OTR tire recycling program being promoted at the time was based on an EPR model and was managed by industry with the management plan approved by Recycle NB. At the time, it was also stated that the recycling fees could be "non-visible," though all the New Brunswick parties interviewed for this study stated contrary preferences.

Documenting previous governmental attempts to create an OTR recycling program fell outside the scope of my mandate. However, since past efforts will impact future developments, I have chosen to include the following brief outline of discussions that took place around 2010-11. I did not research this in detail, but it is clear that dealers and their associations became frustrated with the process, some elements of program design, and the timelines being advanced by the provincial government.

In anticipation of a regulated EPR program, industry created the Atlantic Canada Tire Stewardship Board to manage its dealings with the government. Glenn Maidment, who is now the President of the Tire and Rubber Association of Canada (TRAC), was the interim Chair.1

In an October 28, 2011, letter to the department of Environment, the Interim Chair of the Atlantic Canada Stewardship Board states: " ... the Board was both surprised and disappointed to learn the Department is still a very long way from delivering a draft tire regulation." He further stated that "not having an Off-the-Road tire program for another two years is problematic and will put extraordinary pressure on the industry and tire dealers."

At the time, dealers were concerned that the "eco-fee" would not be visible to the consumer; many still hold that view.

Mr. Maidment concludes his letter by saying: " ... the Board decided to essentially put everything on hold, effective immediately, until the Department presents a Regulation." He does, however, reaffirm industry's desire to work with the government when it was ready to develop a regulation.

The creation of a program would be considerably setback if the government once more initiated discussions with stakeholders-particularly industry-without being able to follow through with the appropriate regulatory aspects of a program.

² Source: documents produced by ELG at the time provided to the consultant and interviews 2019-20.

Advice from Industry Associations

Three industry associations were consulted for this study. Their mandate is briefly summarized, and the key issues they raised during the consultations are presented in this section of the report.

TRAC advocates on behalf of their members on government and industry matters, on both a domestic and international scale.

TRAC has long served the tire and rubber industry by liaising with various government and regulatory bodies. Their role is to keep their members informed of policies and regulatory issues that affect their sector, and to speak to the government and relevant authorities with a single voice on matters of regulatory compliance, new regulations, and other matters where a broader approach may be beneficial.

TRAC is an advocate for Extended Producer Responsibility (EPR) and they work with provincial governments to establish industry stewardship recycling programs and other End-of-Life Tire Programs, specifically for scrap tires.

The membership of the CATRA (Canadian Association of Tire Recycling Agencies) is made up of tire recycling agencies in Canada's provinces and territories. CATRA's mission is to enhance the effectiveness of each member's program by sharing information, expertise and resources. All ten provinces and the Yukon Territory are members of CATRA, and each has a form of scrap tire program. Their goal is to divert 100% of used tires from landfills and to create marketable products and value-added end-of-life uses.

The Atlantic Tire Dealers Association (ATDA) is the collective voice of tire dealers in Atlantic Canada. Their aim is to keep their members informed about advances made in products and changes in the industry that affect their businesses.

They promote cooperation between their members and those in other tire industry associations, as well as local, provincial, and national regulating bodies.

Both TRAC and the ATDA indicated that they favoured an EPR program for OTRs, and that they would put forward a management plan on industry's behalf to manage the program if the government decides to proceed in that direction. The ATDA advocates for a dealers-based program, where dealers would collect the fees and the tires would be processed by TRACC, in Minto. It is their hope that other Maritime provinces will join the program once it is implemented in New Brunswick. A phased-in approach to the program, with gradually increasing fees, may help garner the support of stakeholders.

The ATDA also flagged the need to have a system to account for tires that come from other jurisdictions, such as Maine, into Canadian border towns, like St. Stephen. This issue is being managed within the current tire recycling program and will have to be considered in an OTR tire recycling program.

TRAC also advocates for a "retail based program" in New Brunswick. Back office support, however, could be provided by eTracks, a TRAC creation which is one of the recycling agencies in Ontario (see section on provincial programs).

As Glenn Maidment noted, the advantage of a retail-based system is that you know exactly what is sold and picked up for recycling, making the audit of the program relatively straightforward. Maidment also indicated that New Brunswick should consider developing one program for all tires.

The key to a successful program is having the local capacity to recycle all the types of tires that are included in the program. If New Brunswick's processor cannot recycle certain types of OTRs, including

those tires in the program will lead to much greater costs-the tires would need to be shipped and processed outside the province. Other provinces provide precedents to deal with this issue. For example, Alberta's tar sands industry, which uses some of the biggest tires in Canada (over 39 inches), is responsible for working with tire distributors to dispose of them in an acceptable manner.

TRAC believes that fees should be set by the industry steward for the program, and not set in regulations. Industry is incentivized to keep fees as low as possible in order to keep costs down. If a dealer chooses to show the fee on the bill of sale, it should be clear to the customer that it is a recycling fee. Fees need to reflect the actual cost of recycling each type of tire, thus avoiding cross subsidization.

TRAC interest in being a participant in a New Brunswick OTR recycling program was best expressed when Mr. Maidment said, "tell us what you want, and we'll build you the program you want."

In short, both the ATDA and TRAC would be eager participants in a New Brunswick OTR program.

The meeting with the representatives of CATRA took place before most provincial interviews and it was fruitful to gather high-level information on how other jurisdictions deal with OTRs. The Association's mandate is to facilitate the sharing of information among members, and not to act as an advocacy group. Nevertheless, some of the themes I heard when interviewing provincial agencies were echoed by CATRA as potential best practices. These included creating one program for all tires, letting industry determine the fees that are not set in regulation, and excluding tires that cannot be recycled. They also emphasized that before proceeding, New Brunswick will need good data on OTR tire sales, our province's recycling capacities, where OTRs can be processed, and the costs associated with transportation, recycling, etc.



DOES NEW BRUNSWICK HAVE THE CAPACITY TO RECYCLE ITS OTRS?

The answer to this question is clear: Yes! Our chosen recycling option, however, will determine the type of end product that is obtained from the recycling process. This section discusses three recycling companies–each one recycles tires using completely different processes, which result in completely different outcomes.

My mandate on tire recycling options was limited to speaking to TRACC in Minto. The two other companies I discuss here, both of whom have made representations and sent a proposal to recycle OTR tires to Government, surfaced during my mandate-this is why they are included in this brief section of the report.

Recycled tires are generally turned into one of three products which are then used for other applications: crumbs, mesh and shred. The production of shreds tends to be favoured when recycling OTR tires.

Rubber crumbs are small, and they are ideal as an alternative to crushed rock. This premium recycled rubber is the perfect sustainable option for paths & walkways, horse arenas, golf cart paths, etc. This light, but dense material is well suited for fill, aeration, and many other applications that would otherwise require crushed rock.³

Rubber mesh is a mix that can include pieces as rough as 5 mm or as fine as powder. It has been used in projects involving polymer binders, like paving and other surfacing. This unique blend of premium crumb rubber contains absolutely no steel, fibre, or other foreign materials.⁴

Shreds are a recycled rubber product composed of bigger pieces. This product made completely from shredded tires for use in both large and small-scale civil engineering projects (TDA Fill). Another section of this report describes how these were used for a road construction pilot project in PEI. Shreds generally contain more metal than the other two products.⁵

The Tire Recycling Atlantic Canada Corporation (TRACC)

Based in Minto, New Brunswick, Tire Recycling Atlantic Canada Corporation (TRACC) is responsible for recycling more than a million tires each year. These tires are brought to their recycling facility and turned into value-added products. Since its beginning in 1997, TRACC has diverted more than 500 million pounds of rubber from landfills.

By working with partners in government and industry, TRACC is considered a leader in recycling innovation, operating a state-of-the-art facility that produces a variety of recycled products. Their diverse line of products ranges from safety items such as snow plow guards, to landscaping materials such as mulch and rubber gravel.

As stated previously in this report, TRACC had partnered with the Atlantic Tire Dealers in 2009 to become the provincial recycler of OTRs in New Brunswick. At the time, they had equipment to recycle OTRs and accepted tires from some dealers and other Maritime provinces.

⁴ Ibid.

⁵ Ibid.

³ Source: TRACC website.

My meeting with TRACC included the President and CEO, Stephen Richardson, three family members who are actively involved in the business, and Dave Bezner, a consultant to the company.

TRACC indicated that they acquired the equipment to recycle OTRs in May 2019, but that it is not yet functional. They also indicated that if given the opportunity to recycle OTRs, they would gladly make other investments. For them, the size or weight of the tires would not be a barrier-they could recycle any OTR used in New Brunswick.

Consequently, the biggest challenge for a recycling program in New Brunswick would be the transportation of these tires. The current system, which involves picking up tires from dealerships and bringing them to TRACC, would be unsuitable for larger and heavier OTRs. To address this issue, the 2009 plan proposed two options to bring the tires to TRACC: dealers could make arrangements to have the tires transported or pay TRACC to pick them up.

TRACC's recycling fees would be calculated based on the weight of the tire. The rubber would be used mostly as mulch. Because of how OTR tires are constructed, mulch from recycled OTRs would necessarily contain more steel than other mulch produced, but a significant amount metal extracted would still be recycled. TRACC would only be supportive of an EPR approach to recycling if it is involved in the program from the beginning, and it would only consider investments in new equipment once a program names them as the designated recycler.

TRACC considers that the current recycling program for regular tires works very well and favours the status quo for regular tires.

On-Site Shredding

Based in Dieppe, New Brunswick, On-Site Shredding provides waste management solutions to a variety of products, including tires and OTRs, by bringing their shredding equipment to the source. They have processed scrap tires into Tire Derivative Aggregate (TDA) for the government of PEI. The TDA from these 350,000 tires were used for road construction applications. Their mobile equipment can also shred products such as shingles, carpets, mattresses and large household appliances.

This company came up in discussions with other Maritime provinces, industry associations, and dealers. When I met with the President, he indicated that the company had in fact made several presentations to the government of New Brunswick on recycling tires, including OTRs, and how the rubber product (TDA) could be used for road construction. Since using recycled rubber in road construction was identified as an emerging trend by industry associations, this is an option that might warrant further exploration in terms of cost and benefits relative to other recycling options. A starting point for further exploration would be to obtain the results of the trial from the Government of Prince Edward Island, which is currently testing this application. In addition, the results of the 2007/8 successful use of TDA by the Department of Transportation to build a highway in the St Stephen area would be useful in assessing this potential use for old tires.

Provincial Bandag, Saint-Basile, NB

In the period that followed past attempts to develop a provincial solution to recycling OTRs, Provincial Bandag submitted a proposal to the Government of New Brunswick, through their local minister. They proposed to recycle OTRs and other tires using a process called pyrolysis. According to the owner, they were willing to invest in the equipment, but the project never received the required environmental approvals. The owner of the company indicated he still has an interest in growing his company with this type of equipment and would also likely be interested in a provincial program developed for OTRs.

The pyrolysis method for recycling used tires is a technique which heats whole or shredded tires in a reactor vessel containing an oxygen-free atmosphere. In the reactor the rubber is softened, such that the rubber polymers break down into smaller molecules. These smaller molecules eventually vaporize and exit from the reactor. These vapours can be burned directly to produce power or condensed into an oily type of liquid, generally used as a fuel. Some molecules are too small to condense; they remain as a gas which can be burned as fuel. The minerals that were part of the tire, about 40% by weight, are removed as solid ashes. Studies demonstrate that when performed properly, the tire pyrolysis process is a clean operation and produces little emissions or waste. According to the proponent, there is a local market for the oil produced, and the metal can be recycled.⁶

⁶ Sources: Interview with Raymond Ploudre, January 23, 2020; "Tire Recycling" from Wikipedia.

IMPACTED PARTIES

OTRs are primarily used by sectors such as mining, agriculture, forestry, and construction (including road construction). Recycle NB requested that I communicate with seven organizations to get an understanding of what their members do with used OTRs, and to gauge how they might react to an EPR program for OTRs. I also interviewed representatives of three Regional Service Commissions at Recycle NB's request.

Mining

When contacted, the Mining Association of Canada indicated having no information to provide

ORGANIZATIONS CONSULTED

- Agricultural Alliance of New Brunswick
- Forest New Brunswick
- NB Federation of Independent Woodlot Owners
- JDI (forestry operations)
- NB Road Builders Association
- Construction Association of New Brunswick
- Mining Association of Canada
- Southeast Eco-360
- Chaleur Regional Service Commission
- Northwest Regional Service Commission

on OTRs and recycling tires. I therefore communicated with the Department of Energy and Resource Development in New Brunswick to get a better understanding of mining in our province.

In New Brunswick, there are currently six active mines, 29 inactive mines, and one major project in development (Appendix C). The mining sector is a considerable challenge for recycling OTRs, as it uses the biggest tires on the market. Depending on the equipment, they can be bulkier, heavier, expensive to transport, and harder to recycle.

Of our six active mines, five use the same type of equipment that would be used for road construction or construction in general. One mine potentially has bigger equipment, but according to several sources these could still be processed in New Brunswick.

When asked what happens to tires in the mining sector, several interviewees indicated that they often stay in the mine when it is abandoned. I have personal experience of visiting Brunswick Mines before their closure and witnessing equipment–including tires–that was to be left on the bottom after the mine closed.

The provinces where mining is a bigger sector than it is in New Brunswick cautioned me about the challenges of recycling these giant tires. However, given the information provided by the provincial Mining and Mineral Resource group, I have concluded that this should not be a barrier to implementing an OTR program which covers all oversized tires.

Agriculture

I spoke to two representatives of the Agricultural Alliance of NB: The Executive Director and a field worker who deals with the Environmental Farm Plan Program. Both could only give their personal opinions as members have not formally been surveyed on the topic of OTRs and they have not been discussed since the government last raised this topic around 2011.

The Alliance is composed of sector councils (e.g. milk, fruit, meat, etc.). As a next step, the Alliance suggests that each of these groups be formally consulted. In general, it is believed that a program would be accepted if it achieves environmental outcomes, is easily accessible, and its fees are reasonable and transparent. Farmers in every province equipped with an OTR recycling program are supportive of the program, and they did not raise significant opposition when the program was introduced.⁷ Having an estimate of the environmental fees is key to further discussions.

Based on field visits and a knowledge of the sector, the Alliance does not seem to think there are large "stockpiles" of OTRs on farms. Many farmers return their tires to dealers for a fee "which farmers seem to tolerate." A practice reported by other provinces seems to apply to New Brunswick. Farmers like to keep old tires "just in case" they need them again, or they put them to other uses, such as an alley scraper in dairy barns or field drag. If farmers pay a recycling fee when purchasing a tire, it may therefore be a long time before they can take advantage of the service.

Road Builders/Construction

Prior to my interview, neither the NB Road Builders nor the Construction Association of New Brunswick had not given any consideration to what members do with OTRs. The Road Builders did survey members at an association meeting. The reaction to a provincial program is generally positive, but again, the amount charged for fees will be a determining factor. Both organizations have two thirds of members in common, and the Construction Association indicated that their members who use equipment with OTRs would all be members of the Road Builders. The Road Builders can therefore represent their own interests in future discussions.

Road building enterprises indicated that they either bring the tires back to retailers (in some cases, for a fee) or bring them to select landfills that accept tires (again, for a tipping fee).

They reported very few stockpiles in their sector, and they stated that old tires have no alternative uses.

Road Builders indicated that they are aware that scrap tires can be used to build roads, perhaps because of the PEI experiment.

Those present at the meetings indicated that they would be happy to participate in further consultations, once more information is available about the program and its associated fees.

Forestry

Three organizations were interviewed to get the perspective of the forest industry: Forest NB, NB Federation of Woodlot owners, and JDI (forestry division).

⁷ Source: interviews with provinces with an OTR program.

The Federation of Woodlot Owners did not have an opinion on how a recycling program would impact their members but cautioned against any new regulation that increases costs to their members.

Forest NB conducted an informal survey of its members. Only one reported a stockpile of 40 to 50 OTR tires that would need to be cleaned up. Members in the southern part of the province return their used tires to their local dealer. It seems harder for northern members to dispose of the old tires. The cost of disposing of the tires is either included the initial sales price or dealers collect a fee once the tires are returned. There is no consistent pattern.

As a huge player in the forest industry, JDI maintains approximately 80 pieces of gear in their mils. The used tires are "a burden to them", however, they have made arrangements for dealers to take back the old ones. The person I interviewed did not know if the dealer charged a fee to take the tires back or included the costs in the initial price.

JDI also has contracts with over 200 contractors to harvest wood. They had no information on how these people dispose of old OTR tires.

Based on the conversations I had, I believe there is a reasonable potential for the forest industry to support an OTR tire recycling program. Direct consultation with that sector should, however, precede the introduction of any program. As in other sectors, the amount of the fee will be critical.

Solid Waste Commissions

Three Regional Service Commissions were identified by Recycle NB to take part in this study.

All three Regional Service Commissions would welcome an EPR recycling program for OTRs. Currently, OTRs are not accepted

REGIONAL SERVICE COMMISSIONS CONSULTED

- Southeast Eco-360
- Chaleur Regional Service Commission
- Northwest Regional Service Commission

at the Red Pine landfill in the Chaleur region. They are accepted for a \$400/tonne tipping fee in Moncton, and for \$69/tonne in the northwest. In Moncton, they reported having about 250 tires stockpiled, and they will eventually get them shredded. In the Northwest, the quantities are "very small." When they get OTRs, they tend to use them on-site for fencing because there is no market for them.

As OTRs can be very big and very heavy, concern was expressed about storing and loading/unloading large volumes if a program is developed.

PROVINCIAL PROGRAMS.

The programs and methods to recycle OTRs vary greatly. In addition to New Brunswick, three provinces (British Columbia, Nova Scotia and Newfoundland and Labrador) do not have programs. Quebec only recycles small OTRs, and PEI recycles OTRs at a loss because the fee is kept artificially low. The remaining provinces recycle most OTRs. This section provides program information on each province. The table prepared by CATRA (Appendix B) gives some standardized information on each province.

Provinces with No Program: British Columbia, Nova Scotia and Newfoundland

British Columbia: Tire Stewardship BC (TSBC)

The British Columbian program excludes OTRs, but it does accept tires used in agriculture and logging. In 2016, TSBC began consulting with industry on the inclusion of small, medium, and large (SML) OTRs into their program (see table). They established that "affected stakeholders continue to indicate support for regulating the current non-program SML OTRs." TSBC indicates that consultations were suspended in 2018, until the Ministry responsible confirms that "it is in a position to amend the Regulation."⁸

The TSBC's research indicates that currently, a significant number of OTR tires which are not included in

BRITISH COLUMBIA TIRE RECYCLING PROGRAM

Included:

Small Agricultural Tires, up to 16",	
Deemed Farm Equipment	Fee \$5.00
Forklift/Skid Steer Tires, 16.5" and Over	Fee \$15.00
Medium Agricultural Tires, from 16.5" to 25.5"	Fee: \$15.00
Logger/Skidder Tires and Large Agricultural Tires, 26.5" and up	Fee: \$35.00
Excluded:	
Small OTR for Industrial Equipment	
Large OTRs for Industrial Equipment	
Industrial Tires with Side Marking "IND"	

the program were being shredded. Until 2018, the shred is transported to a landfill in Washington State by Western Rubber Products (Western), a processor from Manitoba. Two years ago, Western invested significant funds into a plant upgrade, such that they can now recycle those tires into shred, mulch, or crumb. The costs of recycling are covered by a combination of dealers and consumers.

Nova Scotia: Divert NS

Tires used for heavy equipment in industries such as farming or forestry are not part of the Nova Scotia tire recycling program. There is currently "no movement" to include OTRs. The Department of the Environment consulted "two or three" years ago and received "push back" from stakeholders in the mining and the farm communities. The file has been inactive since then.

Divert Nova Scotia indicated that it has no knowledge of where used OTRs end up once they are no longer useful, but they did indicate that there are two processors in the province that can take them.

⁸ Source: Appendix D, OTR Processing Options - Stewardship Plan Annual Report 2018

Newfoundland and Labrador: Multi-Materials Stewardship Board (MMSB)

The Newfoundland program does not accept any farm, commercial or industrial tires. Their website directs consumers to their local waste management facility, where the consumer is charged a tipping fee. One landfill indicated charging a \$170 tipping fee. In some cases, OTRs are put to other uses. For example, the mining industry repurposes them as borders for quarries.

6-0	SEARCH AGAIN
Off the Road Tires	
NORTHERN LABRADOR	
Click on the tabs below for reuse, recycling or safe disposal options.	
Overview Business Services Off the Road Tires (OTR) would not normally be driven on a highway. These tires can be disposed of at most waste managements sites. OTR tires include: • All terrain vehicle (ATV) tires	nt
Industrial tires such tractor or heavy equipment tires.	

Source: MMSB

The MMSB representative interviewed indicated that there is "no movement; absolutely none" to include OTRs in the tire recycling program. This is explained by the fact that they do not have the capacity to process all of the tires currently included in the program. These are shipped to a plant in Quebec where they are burned. MMSB demonstrates that the development of a program needs to start with end markets. There is no point including a product in a recycling program if you cannot have it properly and economically recycled.

Prince Edward Island and Quebec

PEI and Quebec have been grouped in the same category because while they have an OTR recycling program, their fees do not reflect the market costs of the process. For reasons explained below, the OTR portion of the program needs to be subsidized from other sources.

Prince Edward Island: Island Waste Management Corporation

In PEI, all types of tires are included in the recycling program. The fee is called an "Environmental Tax." The use of the term "tax" is interesting, as several people interviewed for this study objected to calling the recycling fee a tax. They preferred using the term "fee," usually preceded by a qualifier such as "eco." Conversely, they call it a tax in PEI because the funds actually go to general revenues. The Island Waste Management Corporation then invoices the province based on the number tires collected.

Environment Tax Rates

This section provides information on Environment Tax rates in the Province of Prince Edward Island.

What rate of Environment Tax is paid by the consumer?

Effective April 19, 2012, the Environment Tax rates are:

- \$4.00 per tire for all new tires with a rim size of 17 inches or less, and
- \$11.25 per tire for all new tires with a rim size greater than 17 inches.

This includes both inflatable tires and solid tires (doughnuts) designed for use as spare tires for motor vehicles.

Motor vehicle is defined as a passenger car, automobile, motorcycle, truck, bus, truck tractor, tractor trailer or similar mobile equipment designed and used for the transportation of passengers or goods including construction equipment and tractors, combines or other agricultural implements.

Source: Island Waste Management Corporation

The tax collected to recycle all OTRs in PEI is only \$11.25. It is kept artificially low so that users do not make a quick trip to New Brunswick to buy OTRs, thus taking advantage of our current lack of a program and its associated fees. As the volume of OTR tires is much smaller than that of the other tires collected, the tax on regular tires ends up subsidizing the OTRs.

The PEI tire program was introduced as a result of a landfill ban in the mid-nineties. No tires of any type are allowed in PEI landfills. Used tires can be dropped off at one of five Waste Watch Disposal sites on the Island, where they collect and send tires to a final destination for processing. Disposing of OTRs continues to be a challenge for PEI. They have sent them to processors in New Brunswick, Nova Scotia and Quebec. They are also exploring the possibility of chipping the tires for the construction of dirt roads because their Department of Highways is starting to "see rubber as a valuable product." When used in road construction, the TDA is wrapped in a membrane, which is then covered with the dirt and gravel used to build the actual road. This technique provides better drainage and a reduction in the impact of freeze-thaw cycles on roads.

PEI favours a harmonized Maritime solution to recycling tires and supports an EPR approach.

Finally, the province saw a big jump in the number of tires being recycled when winter tires became mandatory on the island. This trend was mentioned in interviews with other provinces that introduced a requirement for winter tires during certain times of the year.

Quebec: Recyc-Quebec

Recyc-Quebec currently only accepts small OTRs in their tire program. The fee is \$3.00, which was described as "a deal for contractors."

As with other recycling programs in Quebec, there is a requirement to review the program every six years. Recyc-Quebec has been working with a consulting firm to determine what a program which includes all OTRs would look like. They are not contemplating EPR. Recyc-Quebec would manage the program. The new fee would be visible to the consumer.

The commissioned study on this is not yet public. However, Recyc-Quebec has received a preliminary report that summarizes the results of extensive surveys in the agricultural, mining (including construction) and forestry sectors. It reports on the number of tires entering the system each year, as well as on the number of tires that are stockpiled.



By far, the agricultural sector is the largest user of OTRs in Quebec (see table)

Annual Amount of Used OTRs		
Agriculture	45,384	71.8%
Mining (including construction)	11,601	18.3%
Forestry	6,304	9.9%
Total	63,289	

Quebec has large mines in remote areas of the province. Transporting and processing these tires will be one of the greatest challenges of the eventual program. The biggest impacted group will be farmers, and extensive consultations indicated that farmers and farmers' cooperatives would support a program with a fee of approximately \$50 per tire.

Other Provinces with OTR Recycling Programs

Alberta Recycling Management Authority (ARMA)

Alberta has been recycling tires since 1992. All types of OTRs with rims of up to 39" are included in their program. Their recovery target for 2018-19 was 55% of tires. Recovery rates tend to vary considerably, based on the level of economic activity in the province.

Used tires that exceed 39Đ, which mostly come from the oil and gas sector, are managed by the sector, with Alberta Recycling Management Authority playing a monitoring role.

There is no cross subsidization of tires in the recycling program, and the eco-fee (which ranges from \$40 to \$200) is visible to the consumer.

Category of Eligible Tires	Advance Disposal Surcharge			
OFF-THE-ROAD (OTR) TIRES				
SMALL	\$ 40.00			
MEDIUM	\$100.00			
LARGE	\$200.00			
Additional Information				
This category includes the OTR (off-the-road) Tire designation used by the tire industry, including but not limited to tires designed for use on industrial vehicles or equipment, including Construction, Mining, Earthmover, Haulage, Dozer, Grader, Mobile Crane, Compactor, Front End Loader, Backhoe, Extended Reach Forklift and Forestry Skidder. May have tread coding of "LS", "C", "E", "G", "L" and sidewalls may be marked "TG", "ML", "DT" or "K" and generally fall under section 4 of the Tire and Rim Association Yearbook.				
 a) Small Tires with rim sizes ranging from a diameter of 8 inches (20 cm) up to and including a rim diameter of 24 inches (61 cm). 				
b) Medium Tires with rim sizes ranging from a diameter of over 24 inches (61 cm) up to and including a rim diameter of 33 inches (84 cm).				
 c) Large Tires with rim sizes over a diameter of 33 inches (84 cm) up to and including a rim diameter 39 inches (99 cm). 				

Source: Alberta Recycling Management Authority

ARMA-rather than industry-manages the tire recycling program in that province. EPR is not being considered in Alberta. There was little opposition when OTRs were included in the recycling program with associated fees; since consumers had no way to dispose of their old tires, they welcomed the program. ARMA also did extensive consultations with stakeholders and all sectors of industry. They took a year to settle on the fees for OTRs once the program was introduced, because they needed a better sense of volume and costs. During that period, the regular tire program subsidized OTRs.

Saskatchewan: The Tire Stewardship of Saskatchewan (TSS)

The Tire Stewardship of Saskatchewan (TSS) is the approved program operator for scrap tire management and recycling activities in Saskatchewan.

The TSS is a relatively new organization. It is a non-profit corporation that was established in June 2017 by the Retail Council of Canada (RCC) and the Western Canada Tire Dealers (WCTD) to serve as the scrap tire recycling program operator in Saskatchewan. The TSS is led by an industry-focused Board of Directors, who receives input and advice from an Advisory Committee and from Industry Working Groups. The Tire Recycling Fee is \$25 for agricultural tires, \$57 for small OTRs, and \$140 for larger ones.

Tire Category	TRF
Passenger Car/Light Truck (PLT)	\$4.00
Medium/Semi-truck (MTRK)	\$14.00
Agriculture (AG)	\$25.00
Off the Road/Mining (OTR I)	\$57.00
Off the Road/Mining (OTR II)	\$140.00

Source: TSS website

OTRs in Saskatchewan are collected from retailers and legacy piles, then transported to their single processor: Shercom Industries. OTRs account for less than 2% of all tires collected. The program is entirely funded by users of OTRs, who pay recycling fees to the dealers. The fees are advertised publicly on TSS's website. Retailers collect the fee from consumers. They can choose how to depict this fee on the bill of sale. Because the team at TSS is relatively new, I was not able to obtain any information on what type of consultations were done with industry prior to the introduction of the program in 2017. However, OTRs had been included in a previous program in 2007, and stakeholders were therefore used to paying a recycling fee when the new program was implemented.

Tire Stewardship Manitoba

Tire Stewardship Manitoba (TSM) is a not-for-profit industry organization formed to manage the scrap tire recycling program on behalf of the tire recyclers in Manitoba under the provincial Waste Reduction and Prevention (WRAP) Act. It is an "industry stewardship" or EPR approach to recycling tires. They operate externally from government, but they are accountable to the Minister of Sustainable Development.



STEWARD-FEE RATES EFFECTIVE APRIL 1, 2015 QUICK REFERENCE GUIDE

TIRE TYPE	STEWARD-FEE PER TIRE
Passenger & Light Truck / Motorcycle / Small RV Tires / Free Rolling Farm & Implement Tires	\$3.75
Medium Truck Tires & Rear Farm / Ag Tires 24" rim & under	\$9.00
Rear Farm / Ag Tires 25" rim and over	\$30.00
Small OTRs, Grader, up to and including size 23.5 – 25	\$60.00
Large OTRs over size 23.5 - 25	\$135.00

Source: TSM website

In the true sprit of an EPR program, TSM states that "the aim of product stewardship is to find better methods of diverting or reducing the number of designated materials as landfill wastes by encouraging industry producers to consider improving end-of-life management for the materials they design, manufacture and sell. This is achieved by bringing greater levels of responsibility to the producers and users of the materials and products."⁹

TSM is accountable to its stakeholders and the public for the collection, processing, and environmentally sound disposal of all scrap tires designated under the regulation. Through an open and transparent revenue system, TSM collects a steward fee on the sale of new tires from the retailer and these fees pay for transporting and recycling Manitoba's scrap tires in an environmentally responsible manner. All the steward fees collected are used in the operation and enhancement of the tire-recycling program for Manitoba. TSM has developed board governance policies and procedures consistent with established industry standards, and it is held to account through an annual, professionally conducted audit, as well as through government oversight. The fees are depicted in the adjacent table. The fees for OTRs are in the lower range when compared to other jurisdictions. They allow the OTR portion of the program to break even but do not cover program administration related to OTRs. Those costs are subsidized from fees on the other tires recycled.¹⁰

In Manitoba, industry alone decides on the fees associated with recycling OTRs. It does not need to be approved by government. The fee can be shown on the sales slip, at the discretion of the retailer. It almost always is. To sell a tire in Manitoba, a retailer must have an approved tire recycling program or belong to an association to that effect. Among the other programs reviewed for this study, Manitoba seems to be closest to a full EPR model, where industry is responsible for much of the program decision-making, which must still be in accordance with broad principles set out in legislation and regulations.

Like PEI, Manitoba pointed to a spike in the volume of OTRs when winter tires became mandatory. They also cautioned about equipment that has rubber tracks instead of tires-these tracks contain "more metal than rubber" and, consequently, they are very hard to recycle. In Manitoba, giant off-road tires from mining are excluded from the program but mines are required to have an arrangement with a processor.

OTRs were included in the recycling program in 2008, when the current system was developed. The program was "gifted" two years of revenue from the previous program which made the transition smoother-they were able to start with a lower fee for agriculture. Groups complained during the transition, but it was reportedly not a strong reaction because ultimately, stakeholders wanted someone to take their old tires.

Ontario: eTracks Tire Management Systems

In Ontario producers, manufacturers, and importers are required to have an approved plan for recycling end-of-life tires including OTRs. eTracks serves 50 "customers" (producers), which represent 85% of tires sold in Ontario. The other 400 producers have very small sales volumes and have chosen to partner with one of the five other smaller Producer Responsibility Organizations (PRO) to meet their obligations under the Act.

eTracks began its operations on January 1, 2019. When I visited them in October 2019, they had been in operation for less than 10 months, and many of their processes were still being refined.

Ontario has a unique approach to recycling in Canada. It is an Industry Producer Responsibility (IPR) model, which is also a called Producer Responsibility Organization (PRO) model. This means that there is provincial legislation in place which requires producers (versus tire dealers as is the case in other provinces) to be responsible for managing end-of-life tires (ELT) in Ontario. eTracks was created by TRAC, specifically to meet the requirements of this new legislation.

eTracks helps the tire producers, manufacturers, and importers associated with them to meet their legislative obligations under the Ontario Resource Recovery and Circular Economy Act, including:

- Registering and reporting company performance against the regulations and supporting company data, as required;
- Tracking and reporting tire recovery, processing and chain of custody;
- Procuring supply chain services from ELT (End-of-Life Tires) service providers (collectors, haulers, recyclers, etc.) via fair and open competitive processes;
- Delivering on any other producer obligations that may be established under the RRCEA (such as promotion and consumer education).¹¹

eTracks manages two types of province-wide contracts: some deal with the collection and hauling of tires, others with processing and manufacturing. Their eighty haulers are responsible for maintaining collection sites in every part of the province.

Importantly, a producer is responsible for 85% of the weight of the tires they sell in Ontario. The other 15% is lost to wear on the tires.

Some additional financial information was shared during my interview with eTracks, but I was not given permission to use it given that eTracks is still developing its financial models and is presumably in completion with the other five PROs. The table produced by CATRA, which was updated on November 13, 2019, does provide fees for Ontario (Appendix B). According to the table, eTracks has the highest fees in Canada for medium, large and giant OTRs. The fee is lower for small OTRS by as much as 50%, compared to other jurisdictions (excluding PEI and Quebec, which have an artificial fee associated with OTRs).

There seems to be no consistency in what information is given to consumers regarding the cost of recycling tires. CATRA was able to clarify that in Ontario, it is ultimately the producer who decides whether they will charge their customers a "fee" to cover/offset the producer's costs of recycling the tires collected at the end of life (i.e. 'externalizing the costs'). Producers may also choose not to 'externalize' the costs, and subsequently 'absorb' the costs (i.e. incorporate/bury the costs into the sales price). Most producers (Tire Manufacturers, Tire Importers, OEMs), distributors, and retailers generally pass down the fee to (and ultimately recover it from) the end consumer (i.e. they charge the consumer a "tire recycling fee" at the time of purchase). Those who choose to externalize fees at the time of purchase by the consumer must undertake an audit, to establish that the fees charged to the consumer accurately reflect the costs associated with collecting, hauling, and recycling the tires.¹²

FINDINGS

1. There is an appetite on the part of industry associations and tire dealers for a dealer-based, EPR recycling program for OTRs.

TRAC, ATDA, and the dealers showed strong support for an EPR approach to recycling OTRs in New Brunswick. Most felt that there should only be one program for recycling tires in New Brunswick.

Both TRAC and ATDA indicated that they would step forward and manage the program on behalf of dealers.

Having dealers participate in the program (as opposed to the Ontarian approach of developing the program around producers) will simplify matters. Dealers know what they sell, the fees they have collected for these products, and how many used tires they ship for processing.

2. There is capacity in New Brunswick to recycle all types of OTRs used in the province.

Three companies came forward with a keen interest in recycling OTRs and other tires. The province has an established relationship with TRACC and has received proposals from two other organizations.

The level of the recycling fee will be one of determining factors in getting buy in from users in agriculture, forestry, and road building. In approving the management plan for the program; Recycle NB should consider a number of factors. These include using a cost-effective method of recycling tires, meeting environmental standards, and taking into consideration value added opportunities for the product.

Before making such decisions, there should be discussions among provincial departments, including Transportation and Infrastructure, on whether using rubber in road building is in the provincial interest.

3. There is cautious support from stakeholders.

Those who use OTRs in New Brunswick do not have access to an easy, environmentally friendly, and costeffective way of disposing of them. There is also no consistency in how this is done across the province. These same groups in other provinces support programs that recycle OTRs for an eco-fee. There is no reason why this would not be the case in New Brunswick if the province adopts a consultative approach. Some provinces had a transition period when OTRs were included in the recycling program. Setting a minimal fee for the first year or two, while the true costs are accessed, might be a viable option if OTRs were part of the regular tire program.

A key next step is to have a more direct engagement strategy with all impact sectors, especially farming, which represents the highest volume of tires.

4. Externalize the eco-fee

Every single one of the forty people interviewed for this study advocated for having the recycling fee visible to the customer at the point of sale.

5. There is a lot of variety among provincial approaches to recycling OTRs.

This study demonstrated that there is a considerable amount a variation in how provinces recycle OTRs. In the Maritimes, New Brunswick and Prince Edward Island are open to change. The other two provinces, Nova Scotia and Newfoundland and Labrador, are not looking to include OTRs in their programs.

Variations also exist among the recycled OTRs. British Columbia, for example, recycles farm and industrial tires, but not other forms of OTRs. Quebec and PEI recycle OTRs, but their fee structure does not cover the costs. Some provinces have created organizations to manage the tire program, while others have allowed industry to manage the program. Ontario stands as having a producer-based program as opposed to a dealership-based one. Finally, there is no consistency on requirements for having transparency on the eco-fee.

6. What does this mean for New Brunswick?

Based on the information gathered for this report, I recommend that the province move forward with a regulation on an OTR tire recycling program. I also recommended that the current tire program and any future OTR recycling program be combined into a single, industry managed, dealer based, EPR recycling program.

APPENDIX A

Organizations and People Interviewed for this Report

PROVINCES:

British Columbia

Rosemary Sutton, Executive Director, Tire Stewardship BC

Alberta

Brad Shultz, Director of Operations, Alberta Recycling Management Authority

Saskatchewan

Brad Collins, Executive Director, Tire Stewardship of Saskatchewan

Manitoba

Brett Eckstein, Director, T*ire Stewardship Manitoba* Mike Solkoski, Operations and Financial Administration Manager, *Tire Stewardship Manitoba*

Ontario

Steve Meldrum, Chief Executive Director, eTracks Tire Management

Quebec

Frédéric Duteil, Agent de développement industriel, Recyc-Quebec

Nova Scotia

Gilles Doucette, Director of Operations, Divert Nova Scotia

Prince Edward Island

Gerry Moore, Chief Executive Officer, Island Waste Management Corporation

Newfoundland

Glenda Melvin, Field Operations, Multi-Materials Stewardship Board

NEW BRUNSWICK AUTO DEALERS

Brad Colpitts Branch Manager, Tirecraft, Moncton

John Correia Vice-President Sales and Marketing, Coast Tire, Saint John

John Dirsdale General Manager, GCR Tire Centre, Moncton

Samuel Lavigne Propriétaire, CTR Tires, Bathurst

Raymond Ploudre Propriétaire, Provincial Bandag Tires, Saint-Basile

Ernie Titus Owner, Sussex Tires, Sussex

SECTOR ORGANIZATIONS AND IMPACTED PARTIES

Josée Albert, Executive Director John Russell, Environmental Farm Plan Program, Agricultural Alliance of New Brunswick

Susannah Banks, Manager, New Brunswick Federation of Independent Woodlot Owners

Scott Couturier, Northwest Regional Service Commission

John Griggs, Team Lead Mining and Mineral Resources, Department of Natural Resources and Energy Development

Lance Henry, JD Irving (forestry sector)

John Landry, Executive Director, Construction Association of New Brunswick

Leo LeBlanc, President, On-Site Shredding

Roland LeBlanc, Executive Director, Southeast, Eco-360

Mike Légère, Executive Director, Forest NB

Tom McGinn, Executive Director, NB Road Builders Association

Jonathan Ploudre, Gestionnaire en environnement, Chaleur Regional Service Commission

Stephen Richardson, President/CEO Three family members involved in the company (spouse and two sons) **Dave Bezner**, consultant *TRACC*

Geoff Smith, Government Relations, Mining Association of Canada

INDUSTRY ASSOCIATIONS

Frank Connor, Executive Director, Atlantic Tire Dealer Association

Bob Ferguson, Program Manager **Chris Leary** *Canadian Association of Tire Recycling Agencies (CATRA)*

Glenn Maidment, President **Barry Yutronkie** *Tire and Rubber Association of Canada (TRAC)*

APPENDIX B



CANADA'S TIRE RECYCLING FEES BY PROVINCE / BY TIRE TYPE

Rev. 13 Nov. 2019

A "Tire Recycling Fee" or TRF is the fee collected by a provincial tire stewardship organization to ensure that the tire will be managed responsibly at the end of its useful life (i.e. diverted from the landfill for recycling).

This TRF summary is prepared by CATRA for **general information purposes only**. Information on both the responsible stewards and **the actual TRFs to be remitted is available from** <u>the individual tire stewardship organizations</u>.

TIRE Tire Sub-							ON	ON					
CATEGORY	Category	VT	PC	۸D	SK	MD	oTracks ¹	other	00	ND	DE	NIC	NI
			DC	AD	Л	IVID	only		QC	ND	r L	115	INL
Passenger / Light	Passenger, Small RV, Light Truck	\$7	\$5	\$4 or \$9*	\$5	\$3.75	\$4	Contact the	\$3	\$4.50	\$4 or \$11.25*	\$4.50	\$3 or \$9*
Truck	Motorcycle, Golf Cart, All Terrain Vehicle	\$5	\$5	\$4	\$5	\$3.75	\$4	individual Producer Responsibility	\$3	\$3	\$4	\$4.50	\$9
	Small Utility, RV Trailer	\$5	\$5	\$4	\$5	\$3.75	\$4	Organizations (PROs) in Ontario for	\$3	\$4.50	\$4	\$4.50	\$3
	Lawn & Garden Tractor	\$5	\$5	\$4	\$5	\$3.75	\$4.55	the approach to their	\$3	\$3	\$4	-	-
Truck / Bus	Medium Truck, Bus, Highway Trailer	\$9	\$9	\$9	\$14	\$9	\$14	respective fees, which are effective	\$3	\$13.50	\$11.25	\$13.50	\$9
	Agricultural (Small)	-	\$5	-	\$5	\$3.75	\$9.10	1, 2019.	\$3	-	\$11.25	-	-
Agri- cultural	Agricultural Drive (Med.)	-	\$15	-	\$25	\$9	\$22.76	All PROs are identified on	\$3	-	\$11.25	-	-
	Agricultural Drive (Large)	-	\$35	-	\$25	\$30	\$36.41	the <u>Resource</u> <u>Productivity</u>	\$3	-	\$11.25	-	-
	Forklift, Bobcat/Skid Steer	\$7	\$5 or \$15 * / **	\$4 or \$40 * / **	\$5 or \$14 *	\$3.75 or \$9 *	\$9.10 to \$45.51	<u>Authority</u> (RPRA) website.	\$3	-	\$4	-	-
Industrial	Logger/Skidder	\$7	\$35	\$100	\$57	\$135	\$36.41		\$3	-	\$11.25	-	-
	Skid Steer, Loader	\$7	\$35	\$40	\$14	\$9	\$22.76		\$3	-	\$11.25	-	-
	Aviation	-	-	-	-	-	-		-	-	-	-	-
	Small Off the Road	\$40	-	\$40	\$57	\$60	\$22.76		\$3	-	\$11.25	-	-
Off the Road	Medium Off the Road	\$100	-	\$100	\$140	\$135	\$141.10 to \$273.09		-	-	\$11.25	-	-
	Large Off the Road	\$200	-	\$200	\$140	\$135	\$423.29		-	-	\$11.25	-	-
	Giant Off the Road	-	-	-	-	\$135	\$1014.98		-	-	\$11.25	-	-

* The TRF varies by sub-category type.

** Only selected sub-category types are included in this Province's program.

¹ Full name of this Ontario PRO is eTracks Tire Management Systems.

APPENDIX C



New Brunswick Department of Energy and Resource Development

- active
- ▲ application
- inactive/closed
- × legacy

Claims

ID	MINE SITE	COMMODITY	COMPANY
ACTI	VE.		
1	Caribou	Zn, Pb, Cu, Ag	Trevali Mining NB
2	Sormany	Limestone	Elmtree Resources
3	Brookville	Dolomitic Limestone	Brookville Manufacturing
4	Cassidy Lake	Silica	Atlantic Silica
5	Samphill	Limestone	Graymont
6	Hicksville	Limestone	Graymont
APPL	ICATION		
7	Sisson Brook	W, Mo	Sisson Partnership
INAC	TIVE/CLOSED		
8	Picadilly/Penobsquis	Potash, Salt	Nutrien
9	Halfmile	Zn, Pb, Cu, Ag	Trevali Mining NB
10	Brunswick No.12	Zn, Pb, Cu, Ag	Glencore Canada
11	Mount Pleasant	W, Sn, Mo, In	ADEX Mining
12	Lake George	Sb	APOCAN
13	Armstrong Brook	Limestone	Elmtree Resources
14	Plaster Rock	Gypsum	Plaster Rock Gypsum
15	Wapske	Limestone	Plaster Rock Gypsum
16	Upper Kent Lime	Marl	Upper Kent Lime Works
17	Sears McGee	Limestone	Graymont
18	Havelock	Limestone	LaFarge Canada
19	Lafarge East West	Limestone	LaFarge Canada
20	Murray Brook	Au, Cu	Votorantim
21	Brunswick No.6	Zn, Pb, Cu, Ag	Glencore Canada
22	Key Anacon	Zn, Pb, Cu, Ag	Osisko Metals
23	Nigadoo	Zn, Pb	
24	Wedge-Cominco	Zn, Pb, Cu, Ag	Slam Exploration
25	Heath Steele	Zn, Pb, Cu, Ag	Glencore Canada
26	Chester	Cu, Zn	Explor Resources Inc.
27	Burnt Hill	W	Cadillac Resources
28	Restigouche	Zn, Pb, Cu, Ag	Trevali Mining NB
29	Cassidy Lake	Potash	Nutrien
30	Minto/Chipman	Coal	NB Power
31	Cape Spencer	Au	Robert Richard
32	Keymet	Zn, Pb	George Murphy
33	Millstream Dolomite	Dolomitic Limestone	Elmtree Resources
34	Elmtree	Limestone	Elmtree Resources
35	CNE Deposit	Zn,Pb, Cu, Ag	Stratabound Resources
36	Stratmat	Zn, Pb, Cu, Ag	Glencore Canada

