

**New Brunswick Tire Stewardship Program
Scrap Tire Management Plan
2014-2019**

Approved by the Minister of Environment

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1.0 INTRODUCTION

This Scrap Tire Management Plan (Plan) has been prepared for Recycle NB and the New Brunswick Minister of Environment as part of a requirement under the *Designated Materials Regulation* 2008-54 of the *Clean Environment Act*. Under the regulation, Recycle NB is mandated to operate the Tire Stewardship Program which ensures the proper management of scrap tires as a designated material.

The purpose of this document is to present, in detail, the Plan for the diversion of all highway scrap tires generated in New Brunswick and to provide a means to clean-up any existing highway scrap tire stockpiles. Within this document, the term “scrap tire” refers to a tire that is no longer suitable for continued service on a motor vehicle because of wear, damage, or defect or as otherwise defined in Regulation 2008-54 of the Clean Environment Act. The term “Highway” tires refers to all tires licensed for highway use and for which recycling fees have been collected under the program.

The Plan will be submitted to Recycle NB’s Tire Industry Advisory Committee (IAC) for stakeholder input before being submitted to the Board of Recycle NB for final approval and adoption by the Tire Stewardship Program (TSP).

2.0 PROGRAM BACKGROUND

This section of the Plan outlines the regulatory and industry background for the development of this scrap tire diversion program for the Province of New Brunswick. The overall Plan will include the goals of the program and what steps will be taken to achieve those targets.

The TSP has been in operation since 1996 originally developed under the New Brunswick Tire Stewardship Board (NBTSB). Later in 2008, a regulation change transformed the NBTSB into Recycle NB under which the current TSP now operates.

The regulation specifies that anyone selling tires in the province of New Brunswick must be registered with the program and comply with any policies or requirements outlined by Recycle NB for the operation of the TSP.

The program is funded through the recycling fees remitted by registrants to Recycle NB based on sales of new tires covered under the program in the province of New Brunswick. Scrap tires are collected from tire dealers, municipal landfills or other scrap tire generators throughout the

province by the program's collections contractor and are brought back to their facilities for recycling.

3.0 PROGRAM FUNDAMENTALS

3.1 Harmonization

It is important to note that the core elements of the TSP program Plan are consistent among all other Canadian provinces and most U.S. states that are successfully operating scrap tire diversion programs. Wherever possible and beneficial to New Brunswickers and their environment, the TSP will seek to harmonize with other jurisdictions in order to limit any potential issues which could arise due to disparities between other Canadian provinces or surrounding US states.

3.2 Recycling Hierarchy

New Brunswick's Tire Stewardship Plan embraces the "3 R's" principle which is the foundation for the provincial government's approach to waste diversion. Recycle NB strongly believes in ensuring we have the necessary recycling capabilities within our province and that we eliminate any need to export scrap tires to other jurisdictions for processing. This cycle will only accelerate as new solutions are found that drive processing technologies and post-recycling applications in New Brunswick.

3.2.1 Reduce

Following the principle of continuous improvement in environmental stewardship, the tire manufacturing industry has achieved considerable success in recent years in extending original tire life. Although vulcanized tires have been in use since the early part of the 1900's, the current lifespan of a tire has continued to improve by more than 50% over those which were available on the market just 30 years ago.

Recycle NB will continue to promote ways to increase the tire's lifespan such as the industry led "*Be Tire Smart – Play Your PART*" campaign. This consumer education initiative is a joint effort between the Rubber Association of Canada, its tire manufacturing members and the Government of Canada with the goal of extending useful tire life.

3.2.2 Reuse

Industry is presently engaged in a number of “reuse” initiatives that give new life to used tires. The two principal methods of reuse are retreading and export of used tires. The TSP Plan encourages retreading of commercial truck tires, by placing the recycling fees only on new truck tires, thereby creating a price differential which favours retreads. A reused tire casing can also be retreaded up to three times, greatly extending the life of the product and diverting it from the waste stream.

The TSP Plan also allows collectors to cull used tires for export use. Due to more harsh winter driving conditions, New Brunswick motorists often discard used tires sooner than they might if the driving conditions were more favourable. These used tires can be sold to off-shore markets for continued use.

3.2.3 Recycle

In addition to efforts put towards the reduction and reuse of scrap tires, Recycle NB will continue its program to encourage recycling in our province. This program will optimize the collection and processing of scrap tires, as well as to encourage the development of end-markets and value-added products. This value-added approach has been a cornerstone of the program’s success over the last 14 years.

The following sections will outline a set of guiding recycling principles from which the TSP will develop its operational strategies and processes for the program.

3.2.3.1 Encouraging value-added processes and products

Under the current service agreement to recycle scrap tires in NB, a requirement exists for the scrap tire processor to ensure a minimum of 70% of all scrap tires collected in the province are recycled into value-added products. This requirement ensures that the TSP’s program will remain true to the value-added manufacturing base which has made it one of the most successful programs of its kind.

Factors affecting the recycling of NB scrap tires:

- Condition of tires collected (contamination)
- Scrap tire recovery rates & processor inventory
- Current technology for recycling tires
- Markets for recycled tire products

Historically, markets for rubber material processing (crumb) have been relatively volatile as the supply (of scrap tires) and the demand for rubber commodities (crumb pricing) have not been consistently aligned. As part of this Plan, Recycle NB will look to provide sustainability for the program through the use of value-added materials produced under the program. The benefit of this approach not only avoids the market volatility by providing finished consumer products to the market, but those products can also directly benefit tire consumers, our communities and the environment.

The number of value-added products made from scrap tires continues to grow each year. This category of goods includes products manufactured with recycled rubber content, rubberized asphalt, synthetic field turf, as well as some civil engineering and landscaping applications that provide effective alternatives (and value) with regard to other materials available on the market. This value-added product diversity has remained a cornerstone for success of the TSP in the past and it will be a priority to encourage this aspect of the program going forward.

Through this renewed focus on new products, technologies, and processes the program will seek innovative ways to reduce the need for landfilling and the use of less favourable diversion technologies.

3.2.3.2 Sustainable Development for Scrap Tire Markets

Despite the large scale success the program has seen over the last few years, there remains an ever present threat that even value-added consumer markets may become saturated or depressed over time. The TSP will seek to mitigate this potential circumstance through the development of large scale markets for tire derived products.

Proof of large scale markets as an ingredient toward the success of the TSP would include the use of Tire Derived Aggregate (TDA) in civil projects such as building road beds in difficult areas, installing leachate drainage for septic systems or building of road embankments. An excellent example of diversifying markets where New Brunswickers benefitted tremendously was the success of the Department of Transportation's St Stephen highway project which saw not only the validation of large scale markets for TDA, but it also provided a significant savings to taxpayers as an alternative material.

3.2.3.3 Adoption of Green Procurement Policy

Recycle NB will also look to encourage adoption of recycled products through general promotions geared to reach large scale consumers such as the commercial sector and government. The movement towards "green" procurement provides the policy

framework necessary to advance the protection of the environment and support sustainable development by integrating environmental performance considerations into the procurement decision-making process.

It is expected that the application of a green procurement policy will benefit the environment by contributing to environmental objectives, such as reducing greenhouse gas emissions, reducing hazardous waste, reducing toxic and hazardous chemicals and substances, reducing waste and supporting the reuse and recycling of materials.

Potential benefits from green procurement policy adoption include:

- Leveraging purchasing power to achieve economies of scale in the acquisition of environmentally preferable goods and services, thereby reducing costs and strengthening greener markets and industries
- Resulting in more environmentally responsible planning, acquisition, use and disposal practices within the federal and provincial governments
- Supporting a healthier working environment for employees and for citizens in general through the purchase of environmentally preferable goods and services

The TSP, through Recycle NB, will continue working to promote the use of green policy procurement by provincial, federal and local governments as well as with private / corporate interests.

3.2.4 Recover

Under certain circumstances recycling scrap tires may simply not exist as a viable option. Such cases may include cleaning up scrap tires that are partially burned, contaminated or even in the case where regular recycling markets are not capable of accepting the full annual volume of scrap tires generated during the course of each year. Typically tires would be used whole or shredded and used as Tire Derived Fuel (TDF). The TDF may then be burned in cement kilns, pulp mills or other industrial plants. The energy required to create rubber compounds is as much as 3 to 4 times the energy released than when tires are burned. Use of recycled rubber as value-added products therefore makes more sense both environmentally and economically than burning the scrap tires for their energy value.

3.3 Prevention of Illegal Dumping

While most retailers, haulers and processors strive to dispose of scrap tires in an environmentally responsible manner, unfortunately illegal dumping can and does occur. The TSP's Plan includes a two step process of both auditing retailers to ensure fees are being collected and remitted to Recycle NB as well as maintaining a strong education campaign which seeks to ensure that tire consumers take advantage of the prepaid collection service available under the program.

The program will also maintain a toll-free hotline where New Brunswickers can call to report any concerns for orphaned scrap tires. Once orphaned stockpiles have been located, the TSP will work with the NB Department of Environment for mitigation of any reported sites.

3.4 Stock Pile Clean-up

Scrap tire stockpiles can pose a serious health risk to local communities due to the risk of tire fires or indirectly through health related risks such as West Nile virus as well as other disease vectors. The TSP will aim to take a proactive approach to handling each situation with urgency and care.

While few scrap tire stockpiles remain, occasionally stockpiles across the province are found and dealt with under the TSP. Recycle NB will continue to pursue these orphan stockpiles in cooperation with the Department of Environment and individual municipalities to ensure ongoing identification, prioritization and eradication when they are found.

The condition of stockpiled tires frequently requires using current shredding and crumbing technologies as the tires themselves contain rocks and other foreign materials which may damage processing equipment. Washing or cleaning of scrap tires prior to shredding and crumbing is significantly more expensive and time consuming. Therefore in some rare cases the TSP may utilize alternative methods of disposal including, although not preferable, the incorporation of tires into the cement making process (TDF).

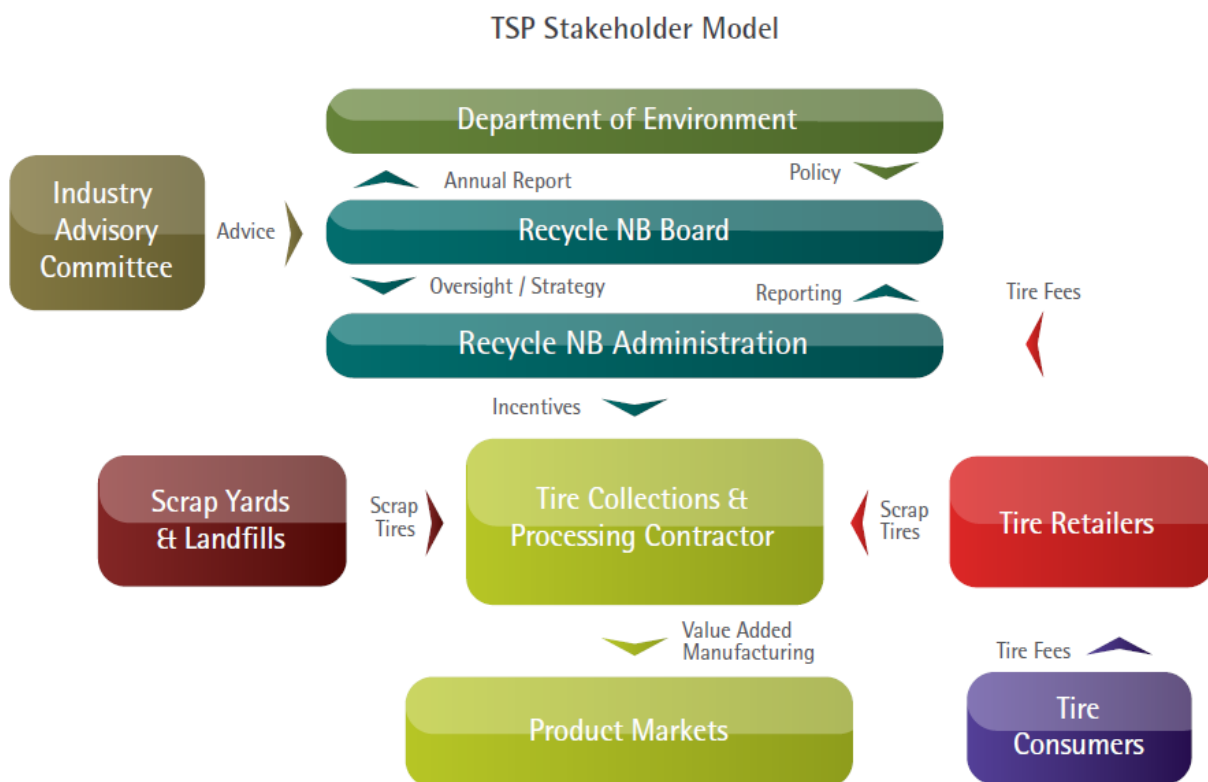
4.0 STAKEHOLDER ENGAGEMENT

The opportunity to participate in the management of recycling programs is offered to industry stakeholders through Recycle NB's Tire IAC. This system of governance allows stakeholders to

use their expertise to provide advice on various program issues and initiatives in the most efficient and equitable manner possible.

Members of the IAC committee meet on a regular basis to assist the board on the oversight of the TSP. The committee offers a unique opportunity to communicate bilaterally with each respective industry and their stakeholders. The meetings provide a venue where comments, concerns and suggestions can be discussed and innovative solutions can be developed for any current or potential challenges. This cooperative partnership with stakeholders ensures that a variety of perspectives can be regularly heard, evaluated and utilized by Recycle NB's board.

Tire Stewardship Program (TSP)



General examples of TSP stakeholders include:

- Government of New Brunswick
- Representatives from the tire industry
- Tire consumer representatives
- Contractor representatives
- Solid Waste Commissions
- Local municipalities

5.0 PROGRAM ADMINISTRATION

The TSP is currently administered by Recycle NB which includes the collection of fees from retailers, all aspects of program operations, stakeholder relations as well as public reporting through the annual report and program management plans.

Each of the TSP's more than 700 registered tire retailers are responsible for collecting tire recycling fees at the point of sale for each new tire sold. These fees must then be remitted to Recycle NB in a process which then primarily funds the scrap tire collection, transportation and recycling operations. The program, from a fiscal perspective, will continue to be entirely self-supporting, thereby receiving no financial support from the Government of New Brunswick.

The tire recycling fees collected will be used solely for the purpose of managing scrap tire diversion and related stewardship programs. This will include funding to designated haulers, processors or other contractors who play a role in handling or recycling scrap tires under the program. The TSP may also use funds for education, communications or market development for the benefit of the program, tire consumers, New Brunswickers and the environment.

5.1 Registration

Under the Designated Materials Regulation, "No supplier shall supply a new tire to another person in New Brunswick unless the person holds a valid registration as a supplier or is acting under the authority of a person who holds a valid registration as a supplier."

As part of its mandate for delivering the TSP, Recycle NB must maintain a detailed database for all registrants under the program. This regulatory requirement ensures a level playing field for all tire suppliers throughout the province.

The submission of information for registration must include:

- The applicant
- The business location
- Complete information for any corporate officers
- Complete information for any contact persons

5.2 Tire Fees

Each time a “new” tire is sold to a consumer in the province of New Brunswick, the retailer will collect a recycling fee (often referred to as an eco fee) and remit it to Recycle NB. For the purpose of applying the recycling fees, a tire is considered to be “new” when “supplied separately or with a machine or device, but does not include a retreaded tire or a used tire”. The differing levels of advance recycling fees vary by tire type in order to ensure that tires which may have a higher collection and recycling cost also receive an appropriate recycling fee. Based on general guiding principles for recycling programs across Canada, the proper level of recycling fees would include a portion to be allocated to stockpile abatement.

It will be the general goal of Recycle NB to ensure that each recycling fee is set in accordance with its true cost of recycling. That is to say the TSP will look to set fees such that it minimizes the potential for any cross subsidization between various tire types. This ongoing objective ensures that the program maintains a “user pay” system consistent with modern EPR programs currently in operation across Canada.

6.0 OPERATIONS

6.1 Collections System (Return to Retailer)

NB’s province-wide scrap tire collection system also provides a ‘Return to Retailers’ service for individual consumers. This means that any tires covered under the program, purchased at any retailer, may be returned to any other tire retailer in the province. By doing so, the program seeks to lower the diversion barriers significantly and provide strong incentives for all tire consumers to “do the right thing”.

In order to encourage responsible diversion, the TSP will continue to provide collection services to both residential (one time collection with a significant number of tires) and business locations for all highway tires captured under the program. Since the recycling fees are paid in advance, retailers and other scrap tire generators are not charged a fee for the pickup of scrap tires covered under the TSP.

6.2 Transportation and Logistics system

Under the TSP, the program requires any designated hauling contractors to pick up tires free of charge from tire retailers and other scrap tire generators and transport them to the designated program contractor’s recycling facilities. Scrap tire Generators may include tire dealers, big box

stores, auto scrap yards and municipalities. Haulers must maintain the capability of receiving collection calls directly as well as scheduling the timing for various pickup location scenarios.

The current contract tender compensates the hauler for pick up and transportation (by weight) of scrap tires based on a manifest system (collections receipts) and recorded scale weights (weigh scale confirmation slips) measured at the recycling facilities. Whenever possible the collected scrap tires will go directly to the processor, but in some cases, they may be sorted and stored before delivery (interim storage) as allowed under the hauler's service agreement.

6.3 Processing and Recycling

In order to become a processor under the TSP, the designated processor must at a minimum be able to effectively recycle all scrap tires generated annually in the province of NB. Upon delivery of any scrap tires, the processor is responsible for weighing any received loads on a weigh scale for recording purposes (as indicated above). Once the collected scrap tires have been offloaded, under the TSP's designated processor service agreement the contractor must then convert the recovered materials into marketable value-added products. This multi-stage process then turns this raw material into various moulded, fabricated or precision -cut products as well as bulk landscape materials and 'crumb' rubber.

The program also works with the processor to develop guidelines for scrap tire preparation and delivery to the facility.

A Certificate of Approval may be required depending on the number of tires stored at the facility. The processor's service agreement will spell out any performance guarantees, specify payment terms and outline minimum recycling requirements for the program.

6.4 Tracking and Audit System

The TSP utilizes a database tracking and control system to record and track scrap tires collected from point of collection to recycling and disposal. This system requires record keeping and reporting by every point of collection, by the transporters and by processors ensuring that anyone involved in the handling process has been verified accordingly. It also ensures that only registrants are receiving tire collections services through the program.

Data will be collected to track the volume of highway scrap tires managed by the collection system. This data will be required of all processors and recyclers to track the residual volumes of scrap tires collected by the program, and how those scrap tire flows are managed. This data

will be recorded and used for tracking and auditing purposes. In particular the program will be using the data to track annual recovery rates for scrap tires in the province, a key long-term program performance indicator. The system will also seek to continually improve best management practices and guidelines including handling and safety requirements.

7.0 RISK MANAGEMENT

Risk management is an important element of the TSP. This entails external risks that could negatively impact effective recycling of designated materials, risks inherent in the management of program funds and general environmental risks from scrap tire management.

When handling a designated material there is always a potential for environmental incidents. The TSP will work with its transportation and processing contractors to ensure compliance with environmental regulations and best environmental practices with respect to the collection, transportation and consolidation of scrap tires. The risks may include external risks such as processor disruptions, environmental incidents involving designated materials, disruption in the collection system, or a disruption in markets for the recycled products.

Preventative measures:

- Manifest and tracking system
- Due diligence of transporters and recyclers for tracking system verification
- Development of best management practices, including training, reporting and guidelines as necessary
- Retailer Audits
- Site inspections
- Environmental insurance
- Tire IAC (stakeholder input/concerns)

The internal risks may include items such as retailer remittances, program expenses and surplus fund management. The goal is to ensure accurate and transparent reporting by registrants and processors.

Preventative measures:

- Analyzing trends and patterns
- Benchmarking with similar programs
- Internal procedural controls

- External auditing of financials
- External investment fund management

8.0 COMMUNICATIONS & PUBLIC AWARENESS

Having been in operation since 1996, the TSP is now considered a relatively mature recycling program. A recent nationwide poll by the Rubber Association of Canada (RAC) showed that New Brunswickers lead the way for knowledge on tire maintenance, tire recycling program awareness and program approval.

Key TSP Stats for the 2009 poll

Public awareness of a scrap tire recycling program in New Brunswick:	81.2%
Public approval of scrap tire management in New Brunswick:	96%
Public support for recycled products made from scrap tires:	99%

While the polls show that the TSP has been tremendously successful over the last few years (the above statistics were in fact the highest in Canada for each category), it also shows there is room for future improvement.

The TSP's ongoing communication outreach will include partnering with Solid Waste Commissions, retailers, public educators and the media, to facilitate its communications and public education program. The program will also be looking for synergies to be gained from partnering or coordinating certain communication functions with other New Brunswick stewardship programs.

Communication objectives include:

- Building awareness among consumers of the program
- Identifying what products are included in the program
- Facilitating tire collection locations throughout NB
- Promoting recycling as a beneficial/environmentally sound alternative to disposal

Potential delivery mechanisms:

- ***Point of Sale Materials*** – for distribution to tire retailers, municipal offices and solid waste commissions, public awareness and education materials

- Stuffer/Counter cards - will advise consumers of the program and how to obtain information
 - Signage – designed for point of sale use, they will advise consumers of the recycling fees as well as how to obtain information on the program
 - Program Brochures – provide general overview of the program and the benefits of recycling
- **Website** – the www.recyclenb.com website will maintain a section dedicated to the New Brunswick TSP which will be designed to provide information for tire consumers, retailers, brand owners, municipalities and other stakeholders
 - Tire types covered under program
 - collection system information for tire pickups
- **Toll Free Telephone number**– the program will employ a toll free public enquiry “hotline” as an alternative method to enable consumers to obtain program information.
- **Local Government & SWC’s** – program information will be provided to local governments and solid waste commissions (SWC’s). Partnering opportunities will be sought such as advertising in SWC calendars or distributing program brochures with municipal mailings.
- **Radio** – the program will look to piggyback onto advertizing campaigns running during key times of the year such as Earth Day, Environment Week and Waste Reduction Week
- **Media Awareness** – the program will create “earned media” through the issuance of media releases and providing information to news media
- **Other** – Other promotion methods may be examined such as television advertising, Yellow Pages or online newspaper advertizing

9.0 PROGRAM GOALS, PERFORMANCE MEASURES & REPORTING

9.1 Program Goals & Performance Measures

In order for any program to be considered successful it must show a track record of achievement over time. As a part of this process, the TSP will identify key goals required to continue the program’s success and strive to meet the annual performance measures in each of its key operating areas.

Operational Goals

Annual targets are set to increase the total amount of tires collected and processed under the program in accordance with estimates of the amount discarded by New Brunswickers and the capacity for this material to be recovered and processed.

Performance Measures:

- 1) Total new tire sales (tonnes) – the new tire sales as reported by registrants
- 2) Total processed (tonnes) – the total amount of scrap tires received by the processor during the year
- 3) Recovery rate (percentage) – the amount of product processed as a percent of the amount of product purchased.
- 4) Total Collection & Recycling Costs - the total amount paid to any designated contractors for the collection and processing of scrap highway tires under the program

Administrative Goals

Annual targets for the administration of the TSP are set to ensure transparency of reporting and to level the playing field for all New Brunswick tire retailers. This portion of the administration also monitors compliance under the program in accordance with the regulation and its reporting requirements for the program.

Performance Measures:

- 1) Total number of registrants – the total number of retailers and scrap tire generators
- 2) Total number of retailer audits – the total amount of audits as well as reporting the recovery of any overdue funds owing the TSP
- 3) Total administration cost – the total cost of administering the TSP including education and awareness.

9.2 Reporting

As part of its effort to ensure program transparency, the TSP will report publicly on its goals and performance measures through Recycle NB's annual report. The program seeks to exceed transparency expectations under the regulation and the reporting process is designed to provide as much information as possible to each of the TSP's stakeholders at all times.

Additional reporting will also occur at the Tire Industry Advisory Committee level where the TSP may engage in an ongoing dialogue with stakeholders to ensure that the interests of consumers, industry, government and non-governmental organizations are recognized within the framework of responsible resource management and environmental sustainability.