



CATRA

Canadian Association of Tire Recycling Agencies



ANNUAL REPORT 2019

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INTRODUCTION

The Canadian Association of Tire Recycling Agencies (CATRA) consists of recycling agencies from all 10 provinces as well as Yukon. These Member agencies work together to share expertise, information and resources, with the aim of developing an industry-leading program that creates sustainable, positive value for end-of-life tires.

In 2019, Members partook in a variety of initiatives including R&D investments, community grants, stakeholder education programs and collection events to continue to grow and strengthen Canada's tire recycling industry, while delivering world-leading tire recycling results.

This annual report provides a snapshot of the tire recycling industry in 2019 and showcases examples of some of the strategic initiatives that make Canada a global leader in the industry.



MESSAGE FROM THE CHAIR

I am pleased to present CATRA's 2019 Annual Report in our 20th year advancing the work of Canada's world-leading provincially-based tire recycling programs.

As I prepare this message, I look to the approaching 30th anniversary of the Hagersville, Ontario tire fire when millions of tires burned for 17 days causing the evacuation of nearby residents and contamination of the environment. With numerous large stockpiles of end-of-life tires throughout the country, provincial governments awakened to the growing public demands for improved environmental management of tires.

Today we see the result of those public demands through the efforts of CATRA's Member recycling programs. In 2018 (latest data year) there were over 487,000 tonnes of end-of-life tires recycled for a diversion rate exceeding 100%, or over 13 kilograms per Canadian.

Member programs provided a combined investment of over \$169 million, a substantial figure that creates economic development and jobs for Canadians diverting material from landfills or stockpiles that no longer poses a significant environmental nor human health threat.

Looking ahead, CATRA continues to support Canada's tire recycling programs by combining our knowledge and expertise toward achieving world-class results by investing in and strengthening the marketplace for recycled tire products.



Brett Eckstein,
MB - Chair

A GLOBAL LEADER IN TIRE RECYCLING

Roughly one billion tires reach the end of their useful lives across the globe every year. While efforts are underway in many countries to address the scrap tire issue, managing scrap tires in environmentally sound and productive ways has been a national priority for two decades. With a focus on waste diversion, driving the economy through product development and innovation, and investing in local communities and key stakeholders, CATRA and its Members have emerged as global leaders in the tire recycling industry.

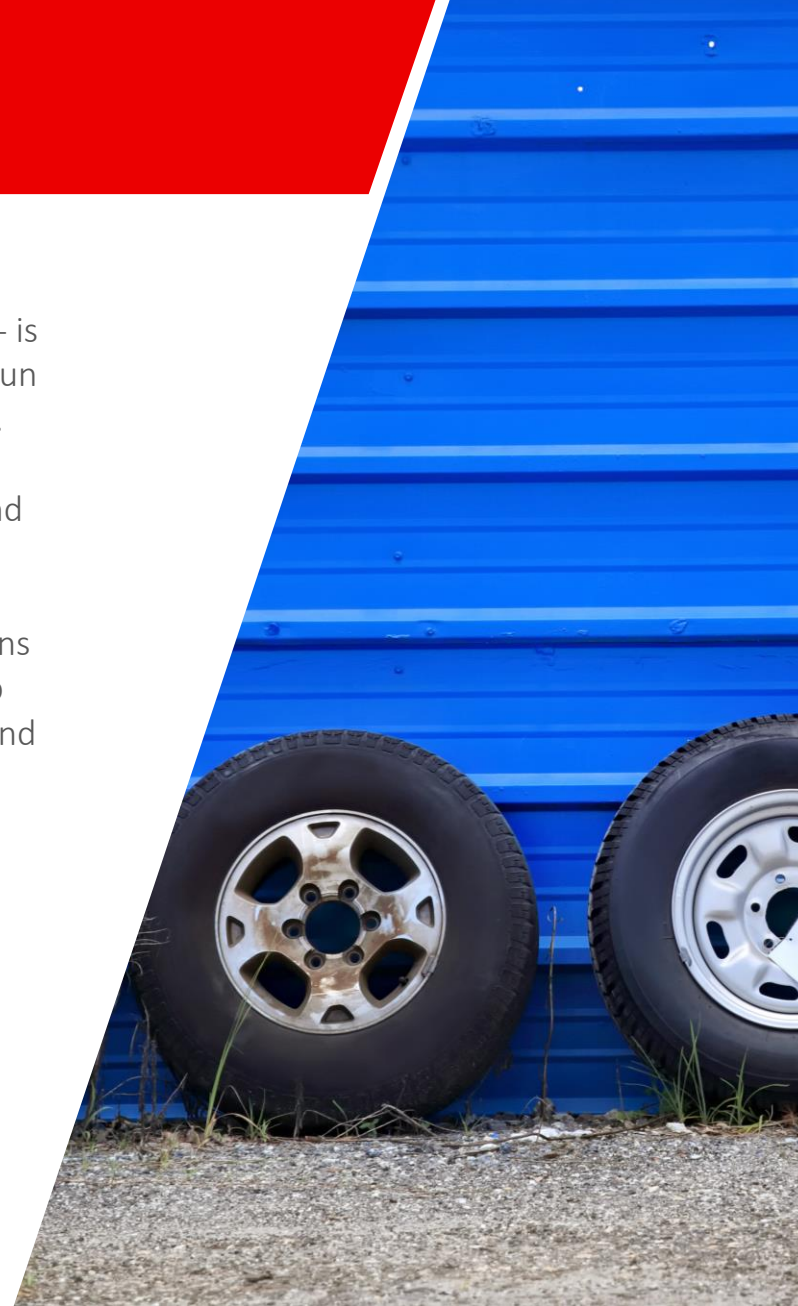


CATRA 
Canadian Association of Tire Recycling Agencies

I. KEY FOCUS: DIVERSION

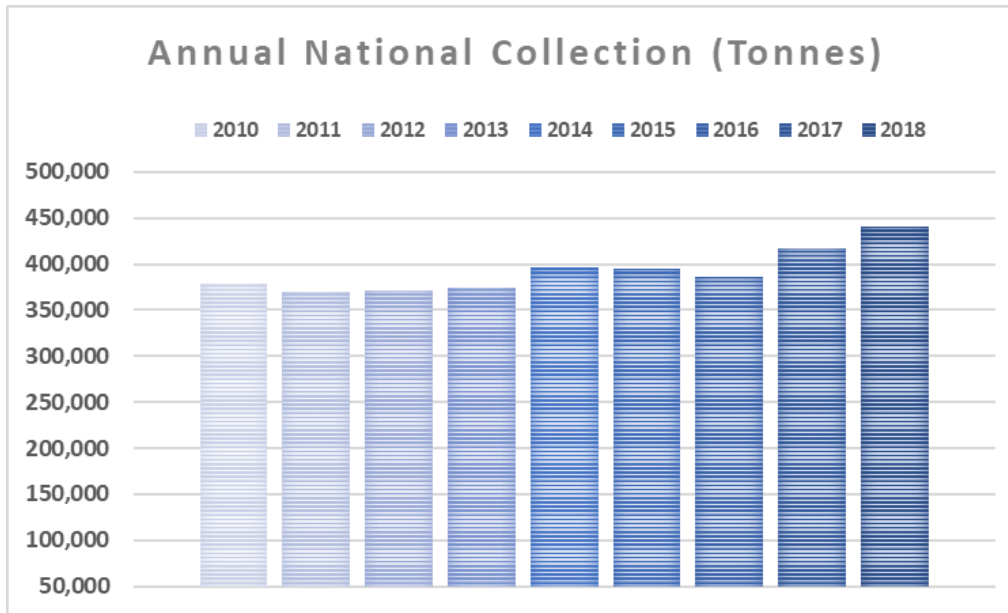
Canada's high diversion rate - which currently sits at about 100% - is realized due to the highly effective scrap tire recycling programs run by agencies in each Canadian province and the Territory of Yukon. These programs collectively work to manage end-of-life tires, ensuring they are safely and responsibly diverted from landfills and stockpiles.

CATRA helps showcase the provincial tire stewardship organizations and their initiatives to continue to build a positive image for scrap tire recycling and demonstrate how it benefits the environment and Canadians from coast-to-coast.



COLLECTION CONTINUES TO KEEP PACE WITH AVAILABLE TIRES

Canada's highly successful provincial and territorial stewardship programs ensure that tire collection remains in step with annual population growth, increases in winter tire purchases, and clean-ups of end-of-life tires previously unavailable for collection.



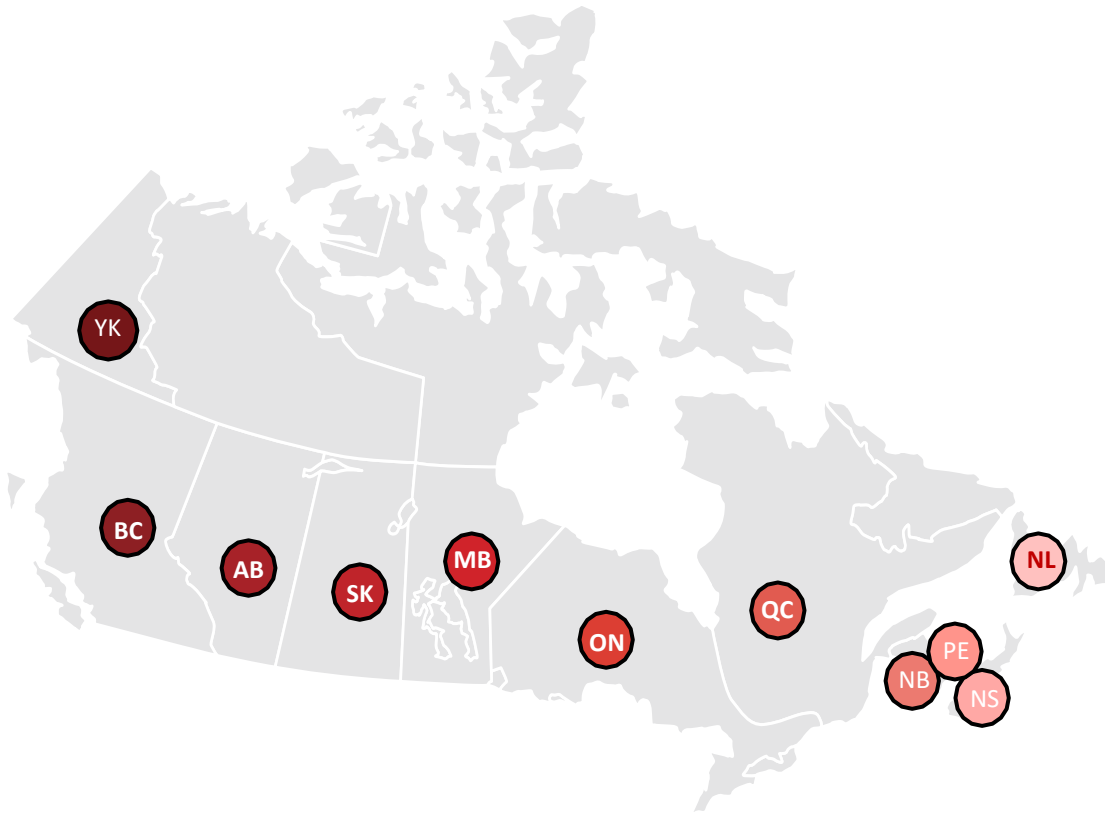
**National
Collection
in 2018:
440,880
tonnes***

This data presents the total tonnes of scrap tires collected by all stewardship programs in Canada from 2010 to 2018, including: PLT (Passenger/Light Truck), MT (Medium Truck) and OTR (Off-the-Road) tires.

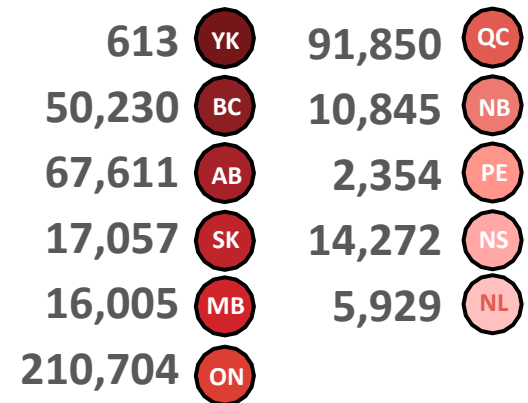
1 tonne = 2205 lbs.

TIRE RECYCLING ACROSS CANADA

Over the past 20 years, Canada has made steady progress by investing in research and technology, and now has a best-in-class tire recycling infrastructure.



National diversion in 2018: **487,470 tonnes***



*The map shows the total tonnes of tires recycled in Canada in 2018, by jurisdiction.

YK: Estimate only.

II. KEY FOCUS: ECONOMY & INNOVATION

In 2019, Canada's leading-edge tire recycling programs have continued to shape industries in the areas of crumb rubber, molded products, tire-derived aggregate and tire derived fuel. CATRA Members have continued to invest in the research and development of new products that can be marketed both locally and globally, contributing to the Canadian economy and further developing the industry's circular economy – a key strategic goal.

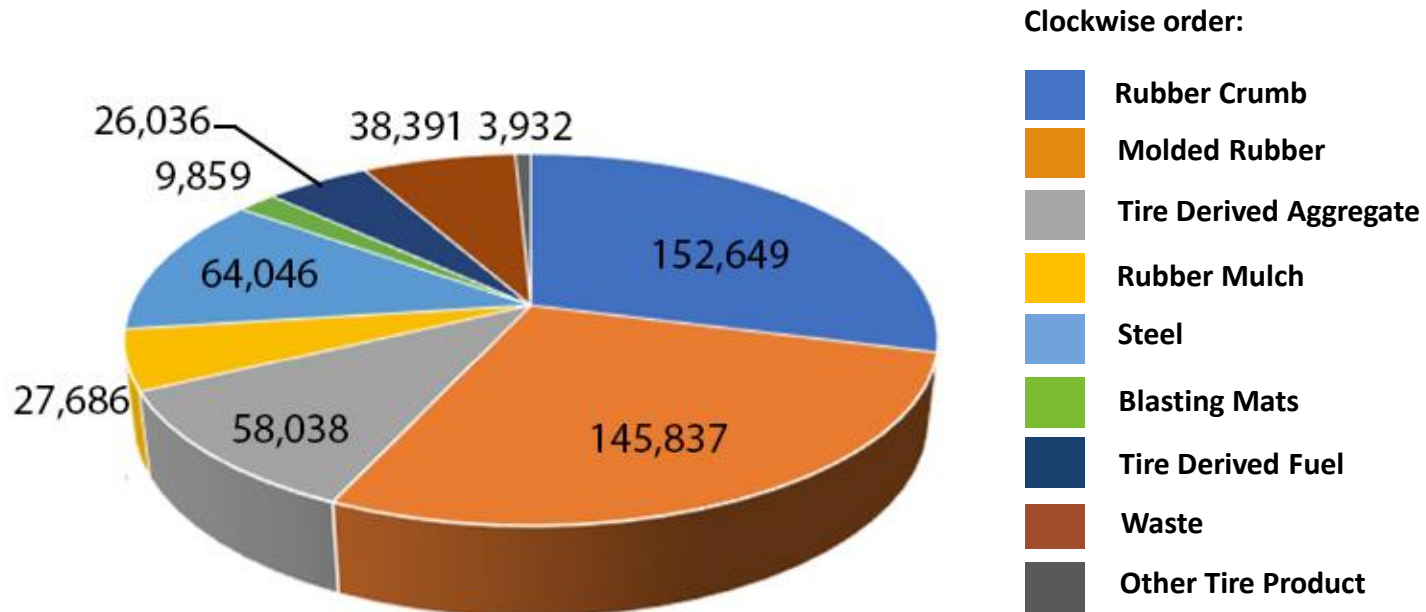
In addition to focusing on product R&D, Members also continued to strengthen and grow Canada's tire recycling industry by investing in innovative new programs to boost recycling capabilities and implement technology solutions that will maximize efficiencies and streamline costs.



USES FOR RECYCLED TIRES

2018 NATIONAL RECYCLING & TDF USES (TONNES)

Because of ongoing investments by Members in areas that include R&D, the number of tires recycled into high-value, tire-derived products and materials continues to grow year over year, helping to further Canada's scrap-tire circular economy. In 2018, approximately 60% of the tires collected across the country were recycled into molded products and crumb rubber.



RESEARCH & DEVELOPMENT

CATRA Members continue to play a vital role in supporting initiatives that recycle and repurpose scrap tires. Working together, they have effectively turned what was once a wasted resource into an economic asset.

The Alberta Recycling Management Authority (ARMA) completed a multi-year project to evaluate the performance of Tire-Derived Aggregate (TDA) as a leachate collection material in Alberta landfills. The results of the study support that TDA is suitable for use in leachate drainage blankets and a technical bulletin has been published that provides insight into its performance and how it compares to conventional gravel drainage layers.

In collaboration with Laval University and Phoenix Innovation Technology, **RECYC-QUÉBEC** completed a research project supported by a \$75,000 grant for the development of a thermoplastic elastomer (TPE) blend of recycled polyethylene and recycled rubber particles. Different blends were developed with unique characteristics that could be tailored for various applications.

RECYC-QUÉBEC also launched two new grant programs; the first applies to R&D programs for product and market development, offering funding up to \$75,000 per company, with the second one to the area of lift tire processing, offering funding of \$200,000. Further, as a result of a grant awarded last year to implement new recycling equipment, a new recycler began processing in May 2019 and is slowly ramping up to an annual capacity of 10,000 tonnes.



RECYCLING INNOVATION & TECHNOLOGY

A strong focus on investment in technology and innovation has solidified **CATRA** and its Member agencies as global leaders in the industry. This includes strides in the end of life tires directed for use as an economical and environmentally sound energy alternative to fossil fuels in the industrial sector.

Divert NS and Lafarge Brookfield partnered to pilot a Tire-Derived Fuel (TDF) project. On August 1st, **Divert NS** delivered the first load of used tires to the Lafarge Brookfield cement plant to use as fuel for their kiln, and the system worked flawlessly. Operations at the plant have since ramped up and more tires are being used as TDF as an alternative to coal. In approving the pilot, Nova Scotia's environment ministry relied in part on a detailed environment study conducted for the proponent by Dalhousie University which favourably compared the greenhouse gas emissions from TDF-supplemented fuels against the existing coal sources. The report was funded by the reputable Natural Sciences and Engineering Council of Canada.

Tire Stewardship BC (TSBC) launched a new eCommerce system providing retailers access to their account information, filing history and to file and pay eco fees. The system creates efficiencies for both retailers and **TSBC**, demonstrating **TSBC's** ongoing initiative to modernize and find efficiencies across the system.



RECYCLING INNOVATION & TECHNOLOGY *(CONTINUED)*

The *Bicycle Tire Recycling Program* launched by **Divert NS** last year grew to include 29 participating bicycle retail and repair shops. Since the program launched, 2,875 bicycle tires and tubes have been collected.

With the assistance of their contracted collectors, **Tire Stewardship of Saskatchewan Inc. (TSS)** implemented a new zone model for the collection of scrap tires at the retail level. This initiative reduced overall collection costs by eliminating the marshalling yard and additional trucking, and streamlined internal processes related to collection.

In the spring of 2019, **Divert NS** extended its agreement with Ballam Farms Limited to support a used tire reuse project as one of its special projects. This local farm enterprise developed both the equipment and customer base for a one-year pilot with a one-year renewal option. Whole tires are split around the tread circumference and the halves are sold to farms across Nova Scotia to secure silage cover.



III. KEY FOCUS: STAKEHOLDER INVESTMENT & INITIATIVES

Many of CATRA's Members have mandates to educate and inspire the public. At CATRA, our role is to provide information and resources to key industry stakeholders to work together to maintain Canada's status as a world leader in tire recycling.

Collectively we achieve this through province-wide programs, grants and sponsorships that are designed to connect with different audiences and to educate about tire safety, maintenance, recycling initiatives and best practices.



INVESTING IN COMMUNITIES

Connecting with communities through special initiatives such as grant programs and tire collection events helps showcase the value of products made with recycled tires and educates Canadians about making sustainable choices.

Community Grant Programs & Investments:

Grant programs help reach Canadians where they live, work and play by providing funding to revitalize community spaces using materials made from recycled tires. Products include athletic and arena flooring, playgrounds, fitness tracks, sidewalk pavers and more. Using these materials in community spaces gives Canadians a tangible way to see the benefits of incorporating recycled materials into their lives.

Tire Stewardship BC (TSBC) helped celebrate the reopening of Boundary Park in Surrey BC, which was dedicated to the late Don Blythe, who was instrumental in the formation of **TSBC**. TSBC donated \$90,000 for the replacement of equipment and rubber surfacing within the park. To date, **TSBC** has awarded over \$5 million in grants for almost 300 projects in over 90 communities throughout British Columbia.

The **Tire Stewardship Manitoba (TSM)** Community Demonstration and Innovations Grant Program provided up to \$20,000 in matching grant funding for communities and not-for-profit organizations to use and benefit from a wide range of Manitoba recycled tire products. In 2019, \$111,671 was awarded to 13 community projects.



YOUR MANITOBA SCRAP TIRES BECAME THIS SPORTS FIELD!

Did you know your tires are being diverted from the landfill and recycled into new products right here in Manitoba?

TO LEARN MORE ABOUT RECYCLED TIRE PRODUCTS VISIT
MANITOBA'S TIRE RECYCLING PROGRAM

 **TIRE STEWARDSHIP**
Manitoba

WWW.TIRESTEWARDSHIPMB.CA

GORDON BELL HIGH SCHOOL, WINNIPEG

INVESTING IN COMMUNITIES (CONTINUED)

The Alberta Recycling Management Authority (ARMA) awarded \$987,700 in funding towards 48 community projects. Since 2002, over \$3.2 million has been provided for the development of 190 tire marshalling sites and \$11.1 million in funding has been allocated for the completion of 600 community projects.

Tire Collection & Diversion Events :

In addition to ongoing scrap tire collection, province-wide tire collection events are held to encourage Canadians to recycle their end-of-life tires and to further showcase the benefits of tire recycling.

Since 2007 The Alberta Recycling Management Authority (ARMA) has sponsored Municipal and Indigenous Community *Recycling Roundup Events* across the province. This was the first year that tires were included in the initiative and they were collected at 29 events across the province. In addition, ARMA 4-H *Tire Roundups* continued for the 17th year with clubs cleaning up rural areas. Together these initiatives diverted just over 49,000 tires from the landfill.

Through a collaborative effort with Indigenous Services Canada, Tire Stewardship of Saskatchewan Inc. (TSS) removed approximately 380 metric tonnes of scrap tires from three on-reserve landfills.

In Ontario, eTracks Tire Management Systems (eTracks) collected approximately 339 tonnes of tires during special tire collections held throughout the year.



INVESTING IN COMMUNITIES (CONTINUED)

Pile Remediation Projects:

In addition to ongoing tire collection initiatives, projects were undertaken by several CATRA Members in 2019 to address larger piles that required additional resources to collect and process for recycling.

- **Tire Stewardship of Saskatchewan Inc. (TSS)** worked collaboratively with the Saskatchewan Ministry of Environment to initiate and fund a project to remediate the abandoned scrap tire pile at the site of the former Assiniboia Rubber Recycling Inc. in Assiniboia, Saskatchewan.
- **eTracks Tire Management Systems (eTracks)** partnered with Algoma Steel, located in Sault Ste. Marie, to remove and recycle 850 tonnes of end-of-life tires, starting September 2019. **eTracks** is collaborating with local haulers from across Northern Ontario to remove decades-old tires and bring them to recycling facilities capable of handling the intake. The vast majority of these tires, ranging from three to twelve feet in diameter, will be recycled into new products. **eTracks** is managing this project which is estimated to be completed in June 2020.
- **eTracks** is also cleaning up a number of other sites in Northern Ontario, clearing approximately 318 tonnes of tires, the majority of which will be sent to **eTracks** enrolled processing facilities to be converted into recycled rubber products such as turf for synthetic grass on sports fields, playground safety pads, sports arena mats, comfort flooring for livestock, rubberized asphalt and padding in safety helmets.



INVESTING IN COMMUNITIES (CONTINUED)

First Nations Initiatives in BC:

- **Tire Stewardship BC (TSBC)** is one of 10 BC stewardship agencies that came together to create the **First Nations Recycling Initiative (FNRI)**, a program for First Nations (FN) who are interested in starting recycling programs within their communities. The program's aim is to raise awareness, offer resources to support recycling, and organize community collection events.
- **TSBC** is also a member of **Indigenous Zero Waste Technical Advisory Group (IZWTAG)** which is an Indigenous-led society dedicated to implementing environmentally responsible waste management in FN communities. FN have embraced recycling programs and green waste management practices and **IZWTAG** supports these initiatives with public education, technical advice and training with the goal of reducing waste and increasing the recovery of recyclable materials.
- **FNRI** collaborates with **Indigenous Services Canada (ISC)** and **IZWTAG** on matters that share the goal of increasing recycling access to FN communities across the province. **FNRI** team members participated in quarterly meetings with **ISC** and **IZWTAG** in 2019 and plan to continue these meetings going forward.



OUTREACH AND EDUCATION

Building connections, sharing information and supporting relationships with key stakeholders such as industry partners, customers, and the public is integral to building a strong recycling industry. CATRA Members are committed to educating and inspiring the public as we work together to create a sustainable, positive value for end-of-life tires in Canada.

Connecting with Industry Stakeholders:

As part of their ongoing efforts to build sustainable tire management systems, **CATRA** Members participated in a variety of initiatives to connect with and support their key audiences in 2019.

The Alberta Recycling Management Authority (ARMA) staff conducted monthly presentations throughout the province to municipalities, Indigenous communities and waste organizations, detailing guidelines for establishing and maintaining tire collection sites and the various benefits available through the program.

eTracks Tire Management Systems (eTracks) delivered 50 communications campaigns to its stakeholders, along with quarterly webinars to address important issues and provide updates from the Resource Productivity and Recovery Authority (RPRA). Other key communications introduced were point-of-sale promotional materials for new tire consumers and a monthly newsletter for customers.

The **Multi Materials Stewardship Board (MMSB)** in Newfoundland and Labrador continued to provide educational program resources to over 600 tire supplier and collection locations across the province.



OUTREACH AND EDUCATION (CONTINUED)

eTracks Tire Management Systems (eTracks) earned an exclusive hole at the *Annual Fundraiser & Charity Golf Classic* held by the Ontario Tire Dealers Association in June. **eTracks** was a gold sponsor of the event and took the opportunity to engage with players in the Ontario tire market.

Representatives of **CATRA** attended the 2019 *Tire and Rubber Summit* in Toronto. The 2019 summit focused on industry developments in technology, innovation, regulation and economics from a Canadian perspective.

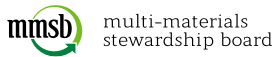


Many **CATRA** Members attended the November 2019 *Conference on Canadian Stewardship* in Vancouver. Sponsors of the biennial event included **RECYC-QUÉBEC**, **The Alberta Recycling Management Authority (ARMA)** and **Tire Stewardship BC (TSBC)**. A number of Members were also exhibitors at the event and **eTracks Tire Management Systems (eTracks)** CEO spoke to conference delegates about “The Road to Individual Producer Responsibility (IPR) in Ontario”.



CONNECTING WITH CANADIANS

In line with CATRA's overarching goal of maintaining a clear and positive image for scrap tire recycling and its benefits to the environment, Members communicated to Canadians the importance of tire safety and maintenance, shared news about recycling initiatives and educated car owners about the proper disposal of their old tires. Outreach was conducted using tools like media relations, advertising, social media channels, and brand ambassador engagement.



The tools utilized to connect with the public this year were:

- Media relations
- Advertising campaigns
- Social media – Facebook, Twitter, Instagram & microsites
- Festival attendance via brand ambassadors
- Industry partnerships



COMMITTEE HIGHLIGHTS

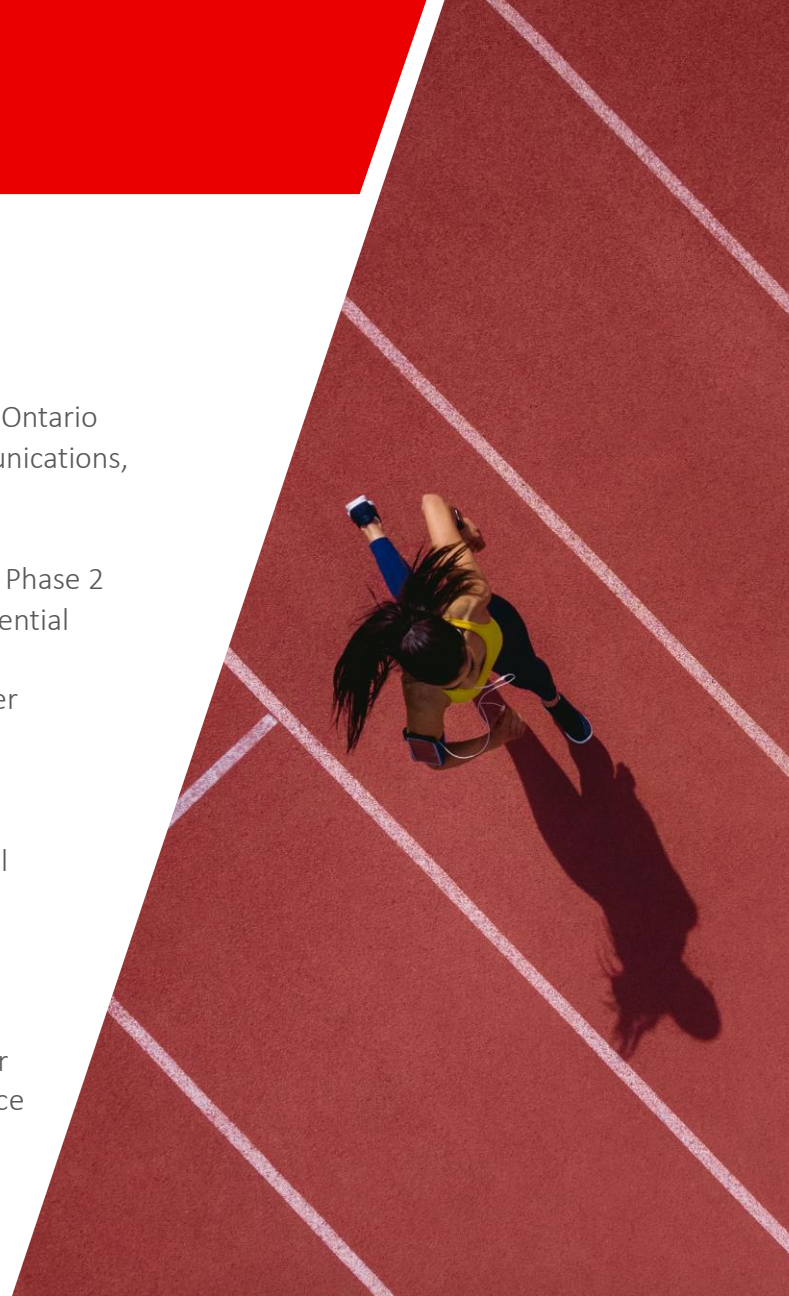
THESE ARE JUST SOME OF THE ACTIVITIES AND ACHIEVEMENTS OF CATRA'S COMMITTEES IN 2019.

MANAGEMENT

- Welcomed eTracks Tire Management Systems as the new full Member for Ontario
- Fully implemented the new 3-committee structure: Management, Communications, Data and Reporting
- Simplified the approach to project delivery
- Completed Phase 1 of a Life Cycle Assessment Project and began planning Phase 2
- Engaged with Ontario Producer Responsibility Organizations (PROs) as potential Affiliate Members
- Updated the CATRA Funding Policy to incorporate an Affiliate Fee and other financial contribution adjustments
- Finalized and began maintaining a CATRA Risk Management Register
- Drafted and implemented a Records Retention Policy
- Implemented other actions from 2019-21 Strategic Plan including an initial examination of considerations to support waste management in northern and remote communities

DATA AND REPORTING

- Fully implemented the new "CATRAreporting" system to enhance Member data collection and analysis in the areas of recycling, operations and finance
- Provided oversight of the Harmonized Compliance Review program, which evaluates the financial compliance of tire retailers with a presence in multiple Canadian jurisdictions



COMMITTEE HIGHLIGHTS *(CONTINUED)*

DATA AND REPORTING *(continued)*

- Completed an update to the Financial Incentives Report, which compares Canadian incentives for used tire collection, transportation, processing and rubberized product manufacturing
- Supported data needs for the 2018 CATRA Annual Report
- Provided data to Members and third parties through CATRA administration

COMMUNICATIONS

- Issued the CATRA 2018 Annual Report
- Posted 2017 and 2018 Member data on the CATRA website
- Continued publishing web news articles to promote Member accomplishments, industry events, and more
- Updated the website appearance and content including information on a new Affiliate membership category
- Created information packages for potential Members and Affiliate members
- Continued growing content in the Members' internal website (Forum) with reports, studies and industry news
- Implemented a process to track third-party inquiries received through the CATRA website
- Continued issuing informative monthly E-News for Members
- Expanded CATRA's brand awareness by participating in external initiatives
- Continued distributing results of a weekly media scan on tire recycling industry topics



ADDING VALUE TO MEMBERS: THE LIFE CYCLE ASSESSMENT (LCA) PROJECT

Each year, CATRA initiates several projects of common interest to its Members

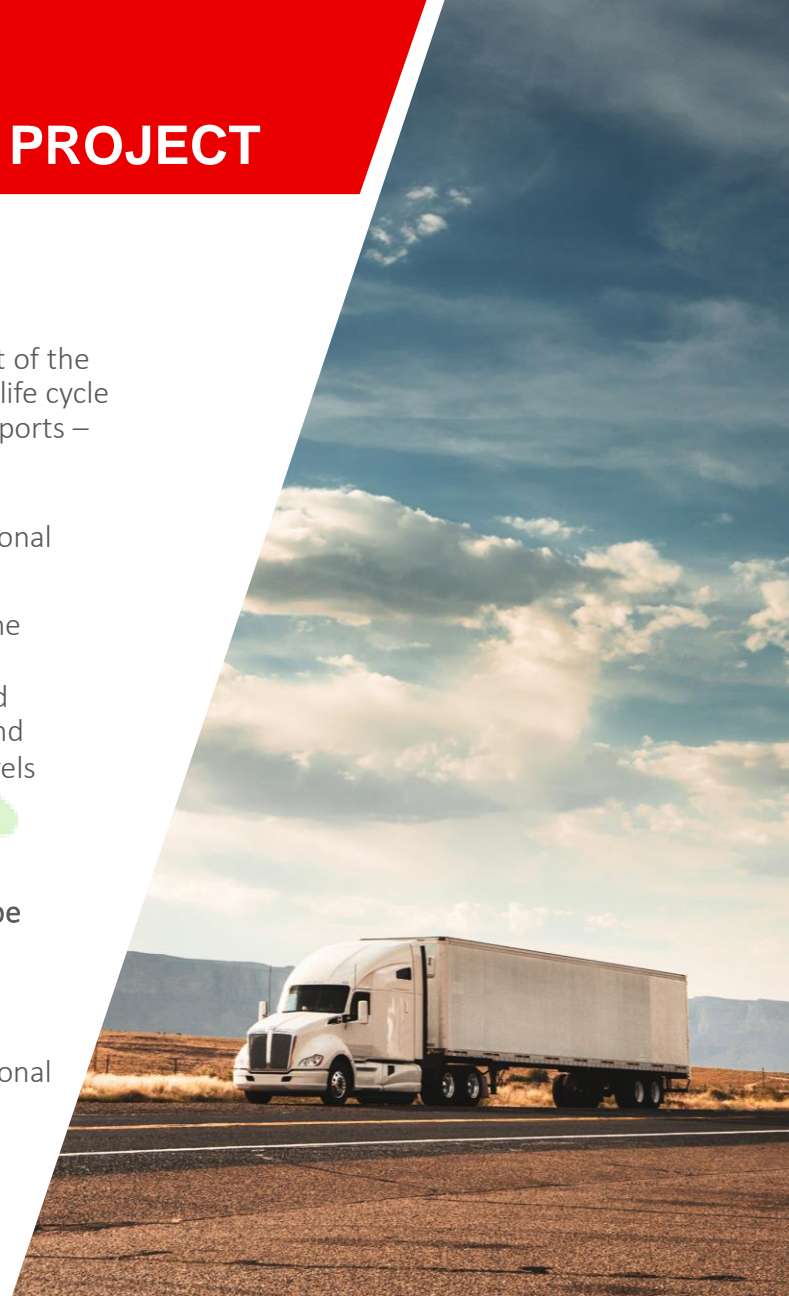
Phase 1 of a significant project took place through 2019: a holistic assessment of the environmental implications of scrap tire management across Canada using a life cycle approach. Eight CATRA Members are participating in Phase 1 and the final reports – national and by Member – are expected in the first quarter of 2020.

Prepared by project consultants, Scope 3 Consulting and Sonnevera International Corp., the final reports will include:

- The relative performance of recycling options and a discussion of how the impacts differ across provinces;
- Collection logistics and energy/resources used during tire processing and subsequent use (TDP and TDF) and for the recovery of fiber and steel; and
- The environmental performance of management options at different levels on the waste hierarchy, with results presented both with and without consideration to displaced production.

Phase 2 of the project will commence in the second quarter of 2020 and will be completed by the end of the year. This phase will:

- Identify the needs of individual Members to develop more province-specific scenarios;
- Go beyond defining the current situation to estimate the effect of additional end-use options of interest (e.g., asphalt, pyrolysis, devulcanization, re-treading); and
- Potentially include an external critical review of the LCA, required for an ISO-compliant assessment.



IN CLOSING

PROGRAM MANAGER'S REMARKS

For many years, used tires from cars, trucks and off-road vehicles were accumulated in storage dumps or relegated to landfills. Things really changed starting in February 1990 when a mountain of 14 million discarded tires burst into flames and took several weeks to fully control. This prompted provincial governments in Canada and many international locations to take notice and decide to act to prevent similar disasters, and tire recycling was born!

Twenty years later, every province and one territory have formal or legislated used tire program plans. The format and rules vary by province, but the goals are the same: collect all used tires and ensure they are managed responsibly. Nowadays, virtually 100% of all scrap tires are collected and recycled and turned into valuable products ranging from crumb rubber and aggregate replacement, to blasting mats and even fuel in some provinces. In the past 20 years, Canada has made steady progress and now has a best-in-class tire recycling infrastructure, something for all of us to be proud of.

In 2019, we were pleased to welcome eTracks Tire Management Systems as the Member for Ontario. eTracks is a not-for-profit Producer Responsibility Organization (PRO) supporting many of the new tire producers towards meeting their obligations to collect, recycle and report to the Resource Productivity and Recovery Authority (RPPRA). eTracks has just completed its first year of operations and is already adding value to other CATRA Members.

CATRA's role is to act as a catalyst to help the provincial tire stewardship organizations share information, best practices and collaborate on projects for the common good. Example: Harmonized Compliance Reviews.

CATRA's Members plan to continue to work together on compliance reviews of tire retailers that have a presence in more than one jurisdiction. This enables the tire retailer to have one compliance review instead of multiple reviews from each participating province.

Life Cycle Assessment project is developing a working model to highlight the environmental factors of the tire collection and recycling process for each of the 8 participating provinces. This will assist with decision making to evaluate environmental issues for the various recycling methods and markets.

"Data is king" with decision makers! CATRA will continue to survey its Members and build a tire recycling industry database with 10 years of information to determine trends and help identify opportunities for the development of new markets and recycling methods.

2020 promises to be the most exciting year yet for Canada's tire recycling industry! CATRA looks forward to participating in the ongoing effort to make Canada the best tire recycler in the world!

Bob Ferguson, CATRA Program Manager



CATRA 2019 COMMITTEE MEMBERS

MANAGEMENT COMMITTEE

Brett Eckstein, MB - Chair
Jeff MacCallum, NS
Sonia Gagné, QC
Caroline McAuley, AB

DATA & REPORTING COMMITTEE

Rosemary Sutton, BC – Chair
Lee Heidecker, AB
Louis Gagné, QC
Mike Solkoski, MB
Brad Colin, SK

COMMUNICATIONS COMMITTEE

Brett Eckstein, MB – Chair
Jamie Seamans, NB
Elizabeth Gray, AB
Jayme Galloway, MB
Shri Parthasarathy, ON



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