

Growing Canada's circular economy, one recycled tire at a time.

While many of the global challenges of 2020 were carried forward into 2021, CATRA members from across the country continued to work diligently to strengthen Canada's tire recycling industry and grow our circular economy.

For the last 30 years, tire recycling has exemplified the practice of circular economics—reducing waste by retaining and recovering as much as possible from our resources. One of CATRA's key strategic goals is investing in the research and development of new products that can be marketed both locally and globally, simultaneously

helping our economy and eliminating waste.

This report provides a snapshot of some of our initiatives and accomplishments from coast to coast in 2021.

About CATRA

The Canadian Association of Tire Recycling Agencies (CATRA) consists of tire recycling agencies from 10 provinces as well as the Territory of Yukon. By sharing expertise, information, and resources, CATRA members are developing an industry-leading program that creates sustainable, positive value for end-of-life tires.



Steve Meldrum CEO

eTracks Tire Management Systems It is an honour for me to take on the role of incoming Chair of CATRA's Management Committee and its Board of Member Representatives. I would like to acknowledge the achievements of our outgoing Chair, Mr. Brett Eckstein of Tire Stewardship Manitoba. Brett's leadership was steady, assured and pragmatic. I thank him for his strategic contributions and leadership through the last many interesting years.

Looking forward, I will be building on these strategies but also focusing on core needs across the country related to tire recycling. As an organization, CATRA will continue to deliver programs that strengthen our industry – through education and the sharing of industry information. However, these efforts will be calibrated to meet new needs associated with evolving recycling and resource recovery regulatory frameworks, as well as the new health and safety reality in which we conduct business.

CATRA has a strategic priority to position Canada as a world leader in tire recycling, through good management, innovation and accountability. We cannot accomplish this by only convincing each other; instead, we have to reach out and enter into other communities and networks to educate the public as well. We need to ensure that laws, policies, structures and financial investment decisions take proper account of the value and benefits of the tire recycling industry.

As many Canadian provinces adopt variations of Producer Responsibility frameworks, we have much to offer each other and our country as leading recycling organizations. Our collective contributions will be welcomed and appreciated throughout the CATRA JV members. Our strength is sharing and learning from each other.

We all continue to deal with local, regional and national challenges presented by the pandemic.
These issues sometimes create obstacles making it difficult to achieve our individual provincial goals: environmental performance, financial and regulatory. With that in mind, let's not forget we are a national organization—united by our values and rich with talent. If each of us puts in what we can, we will find that we can get back what we need—and continue to advance and grow together.



How we transform end-of-life tires into environmentally-responsible products

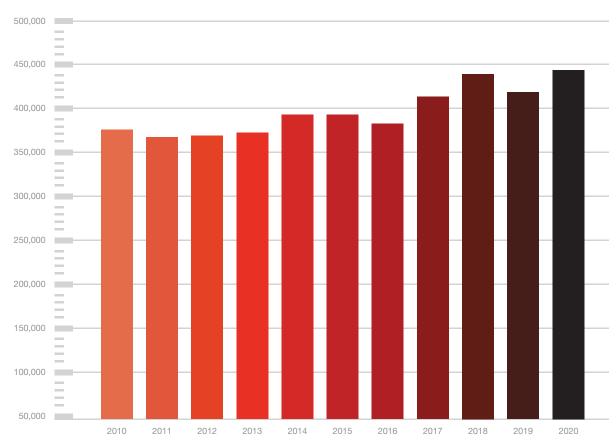
Canada has a staggeringly high diversion rate—sitting currently at almost 100%! This is because of our highly effective scrap tire recycling programs. These programs collectively work to manage end-of-life tires that include PLT (passenger and light truck), MT (medium truck) and OTR (Off-the-Road) tires, ensuring they are safely and responsibly diverted from landfills and stockpiles.

In 2021, 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. Moving forward, we plan to continue driving Canada's circular economy by demonstrating how previously wasted resources can be repurposed into valuable products.

Canada's successful provincial and territorial end-of-life tire programs always stay up to date with national changes, including annual population growth, increases in winter tire purchases, and used tire cleanups.

COLLECTION CONTINUES TO KEEP PACE WITH AVAILABLE TIRES

ANNUAL NATIONAL COLLECTION (TONNES)







TIRE RECYCLING ACROSS CANADA

What is Canada's diversion rate?

This rate is calculated by dividing the annual tonnes of tires recycled by the tonnes of tires collected. For 2020, CATRA's latest data year, the diversion rate was 97% which compares to the 2019 rate of 89%. As a mature program, over time, Canada's diversion rate balances out at close to 100%: the average rate over the past 10 years stands at 98%.



*The map shows the total tonnes of tires recycled in Canada in 2020, by jurisdiction. YK and ON are estimates only.

NATIONAL DIVERSION IN 2020: 432,522 TONNES*

/K 410

QC 96,522

BC 50,266

NB 11,856

AB 66,461

PE 2,463

SK 43,290

NS 14,777

(MB) 17,798

NL 6,703

ON 121,976

LEARN MORE

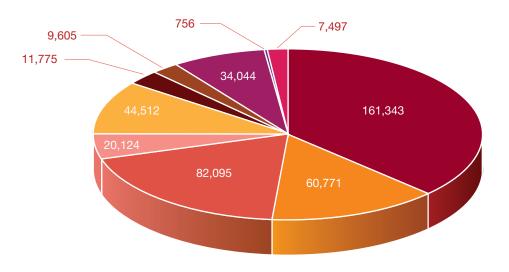
about <u>Measuring Canada's</u>
<u>Performance</u> on the CATRA website.



USES FOR RECYCLED TIRES

2020 NATIONAL RECYCLING & TDF* USES (TONNES)

In 2020, CATRA's latest data year, **432,522 tonnes** of tires were diverted from the waste stream and recycled into products offering distinct value to end-users.







* Tire Derived Fuel (TDF)



SPECIAL DIVERSION PROJECTS AND COLLECTION MILESTONES



Special projects

Alberta

ARMA worked closely with a number of First Nations Communities in 2021, collaborating with members to assist in the reorganization and/or set up of tire collection areas. ARMA also hosted a special roundup event and BBQ at a First Nations Community and filmed the event as a resource for best practices training purposes.

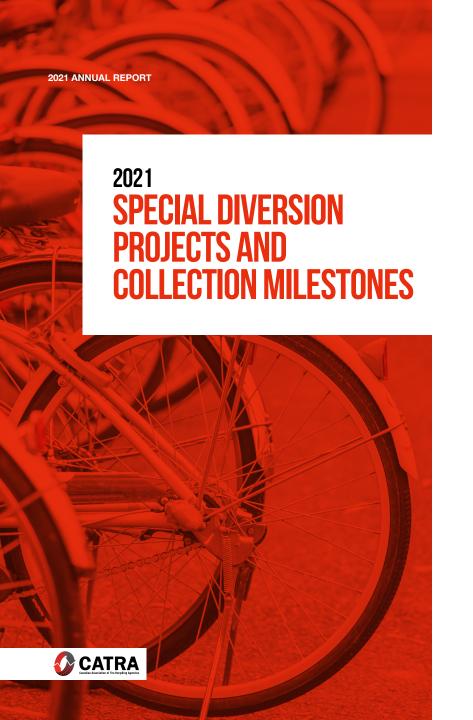
Quebec

For almost 30 years, RECYC-QUÉBEC has worked with program participants to divert and recycle more than 2 million tonnes of car and truck tires that have been transformed into retread tires, blasting mats, and a variety of ergonomic rubber mats for a wide range of sectors. Per year, the quantity of tires recovered has increased from more than 10,000 tonnes in the early days of the program to nearly 100,000 tonnes in recent years. In 2021, more than 95% of recovered tires were recycled.

RECYC-QUÉBEC also continues to manage scrap bicycle tires and used tires from 18 Nunavik villages.

Saskatchewan

Tire Stewardship Saskatchewan (TSS)—in partnership with the provincial Ministry of the Environment and the town of Assiniboia - completed the cleanup of a large abandoned "legacy" scrap tire pile this year. TSS also initiated a large-scale cleanup in the community of Eldon, SK, where nearly 2000 metric tonnes of material have been moved so far and more are planned by the end of 2022. Additional tire cleanups were completed in six first nations communities and four northern locations.



Special projects (cont)

Nova Scotia

Divert NS launched a free Bicycle Tire Recycling Program in June 2018. There are currently 29 bike shops participating as drop-off locations across the province. In the fall of 2021, the first shipment of bicycle tires was shipped to the two end markets. TRACC in Minto, New Brunswick will recycle the majority of tires and all tubes into moulded rubber products. A local craftsperson has recycled over 100 tires into belts.

Collection milestones

British Columbia

British Columbia celebrated 30 years of tire recycling in 2021—making them the oldest recycling program in Canada! Over 100 million tires have been recycled in the province since 1991, and they will be proudly celebrating their 30th anniversary throughout 2022 by partnering with BC-wide organizations and events that focus on recycling and environmental sustainability.

Ontario

Ontario proudly hit a collection milestone in 2021 of 132, 000, 000 kg of collected tires. They also diverted 112, 000 tonnes of material (derived from collected tires—rubber, steel, fibre—that was then used to offset new material in new products).

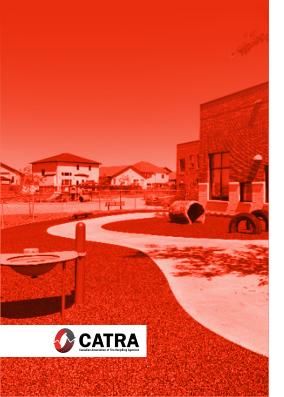


How we drive the industry forward with new ideas.

Investing in innovation is essential to paving the way toward a more economically and environmentally viable future in Canada. By prioritizing research and development and consistently embracing new methods to improve efficiency, CATRA's member agencies and their partners have made many important breakthroughs in recycling and repurposing end-of-life tires.

Together, our members have effectively turned what was once a wasted resource into a valuable economic asset.

Despite 2021's many challenges, CATRA agencies invested in both new and ongoing research and development initiatives within the tire recycling industry.



RESEARCH & DEVELOPMENT

British Columbia

British Columbia's Manufacturing Initiative (MI) program now requires that a portion of every project is attached to research and development. As a result, one manufacturer has upgraded their equipment to achieve higher efficiencies and the other is repatriating production from out-of-province back to BC.

Quebec

Launched in December 2020, the \$500,000 Support Program for Research and Development of Products from the Reuse and Recycling of Scrap Tires will be in effect in Quebec until December 31st, 2023. To date, six companies have benefited from this program with financial aid totaling \$365,000. Eligible

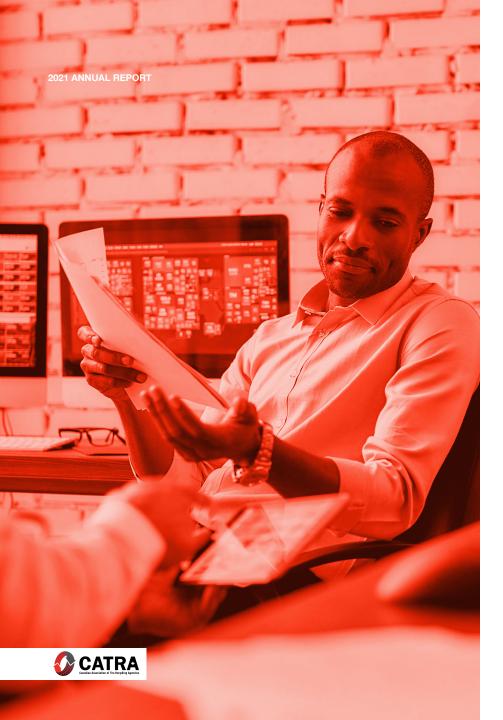
projects must aim to develop new outlets for scrap tires or to improve existing products to increase the quantity of scrap tires recycled.

Nova Scotia



Divert NS continues to support a used tire reuse project with Ballam Farms Limited, which launched in the summer of 2018. Using a portable shear technology, whole passenger and light truck tires are split and then marketed across Nova Scotia and Prince Edward Island to secure silage cover. Volumes processed and marketed have grown over the past three consecutive years.

Divert NS also contributed \$57,981 to support Arduro with material, product testing, and target market validation. Arduro is a start-up that has licensed a technology invented at the University of Louisville to extract Reclaimed Carbon Black (rCB) and Reclaimed Styrene-Butadiene (rSB) from waste tires to be used as raw material for creating new rubber products.



DRIVING EFFICIENCY

Many CATRA agencies introduced new digital platforms this year to improve how data is collected and analyzed.

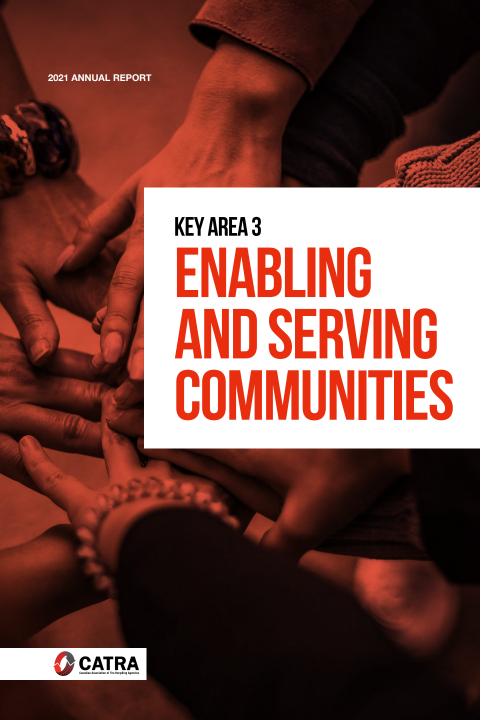
Ontario

Ontario launched the Sustainable Recovery (eSRP) platform to improve resource recovery and recycling data management for tire collectors. They held weekly eSRP tutorial webinars to introduce collectors, haulers & processors to the system, and eSRP video tutorials were added weekly to their "All About eSRP" web page to enhance the training experience. In January 2022, the eSRP web and mobile apps successfully went live to >6,500 users (service providers and customers).

Quebec

Three years ago, RECYC-QUÉBEC launched its new portal allowing real-time online reporting and transactions. This new tool has proved to be very successful and efficient for all key players in the program, from haulers to processors and RECYC-QUÉBEC. Furthermore, RECYC-QUÉBEC plans to incorporate the electronic transmission of weighing tickets to the portal. This would be the final implementation step of the portal and will allow RECYC-QUÉBEC to achieve its 100% paperless goal!

Newly introduced in 2021, a seasonal bonus is now granted to carriers. This applies to their transport declarations during the two peak generation periods (i.e., fall and spring) for which recovery slips have been completed, as well as pick-ups carried out in full according to quantities requested within the prescribed deadlines. In the spring of 2021, 4 out of 5 carriers received a bonus totaling \$310,000.



How we connect with our stakeholders

CATRA members are committed to educating the public about the environmental and economic benefits of tire recycling. By providing clear and compelling information and resources to members of the public—including key industry stakeholders—we ensure that our mission and values are understood and embraced by Canadians.

Our members connect with, and give back to, their communities through a number of special initiatives—including grant programs and tire collection events. They also regularly engage with the public through media relations, advertising, and social media channels to get their message out.



2021 COMMUNITY ENGAGEMENT AND EDUCATION



British Columbia

TSBC saw the launch of their new website (tsbc.ca). They also ran bus and radio ads to promote where to find a drop off location for tires and utilized digital media to showcase some of the products made from scrap tires.

Ontario

eTracks participated in a York Region School Board program: Community Connected Experiential Learning Challenges, which presents students with a case study to come up with solutions to real-world business challenges.

Alberta

ARMA took its Recycling
Roundup Program in a new
direction by engaging its staff
in a curbside event with the
Town of Devon. Over two
days in July 2021, staff
assisted Devon residents by
collecting old electronics,
paint, tires, and used oil
materials left at the curb,
getting hands-on experience
on the frontline of the programs.

ARMA conducted virtual Best Practice Presentations to train nine municipalities and Indigenous communities on the set-up and maintenance of collection sites. These are being developed into a training series to be accessed through their planned education website.

Quebec

In the fall of 2021, RECYC-QUÉBEC promoted ways to extend tires' lifespan in the Canadian Automobile Association (CAA) magazine (a readership of more than 1.9 million readers) and its website. This information was also shared on the RECYC-QUÉBEC Facebook page.

2021 COMMUNITY ENGAGEMENT AND EDUCATION



Manitoba

TSM conducts year-round community education and awareness programs and campaigns focusing on "What happens to your tires" (tire recycling and tire-derived products made in Manitoba), as well as proper tire maintenance and how it positively impacts tire life vehicle safety and the environment. In 2021, TSM continued to promote its messaging through digital marketing efforts on Facebook, Instagram, and Google Ads. They also ran two online survey contests, which educated participants about how and why tires are recycled. The surveys collected 1561 entries, 5.478 clicks, and a combined total of 1.320.113 impressions over the 4 & 6 week runs.

Newfoundland

MMSB continued to promote tire recycling through digital marketing campaigns that were strategically run during tire change-over periods. These campaigns used social media, as well as digital advertising placements. Social campaigns reached over 141,000 users. while digital campaigns received over 2 million impressions. Additionally, MMSB launched a new video to tell the story of tires in early 2021, which continues to be promoted to residents of Newfoundland and Labrador. To complement its digital campaigns, MMSB also created

new tire recycling radio and television commercials in 2021.

In late 2020, MMSB introduced a page devoted to tires on its Rethink Waste NL site, a onestop shop for waste management information. During 2021, this webpage has become the most visited on rethinkwastenl.ca, receiving over 18,000 page views which were highly driven through digital marketing campaigns. The site also contains a search bar to allow users to quickly search for the proper disposal options for any waste item, with tires being the most searched item.

Saskatchewan

TSS ran two radio campaigns in 2021 to increase awareness of their Return to Retailer (R2R) program where people can responsibly recycle their old tires. The campaigns increased collection rates by 3% (however, when legacy tire cleanup efforts

are factored in as well, their overall recovery rate increased to 78.7%-- an increase from 71.9%). Participating retailers in the R2R program saw a 33% jump as a result of the increased exposure of the program.





INCENTIVES AND REWARDS

Alberta

Each year, ARMA celebrates three registered collection sites that are recognized for their dedication in meeting all program requirements and providing safe and convenient areas for residents and businesses to recycle. The 2021 Collection Site Award of Excellence winners were: South Forty Waste Services Commission, Devon Recycling Depot, and the Airdrie Recycle Depot.

After consultation with the tire industry and with the support of Alberta's Minister of Environment and Parks, ARMA increased the environmental fee on medium truck tires (MTT) to \$14.00 (effective April 1, 2022). This rate better reflects the current costs of collecting and recycling MTT, enabling the program to sustainably manage these tires when they reach end-of-life.

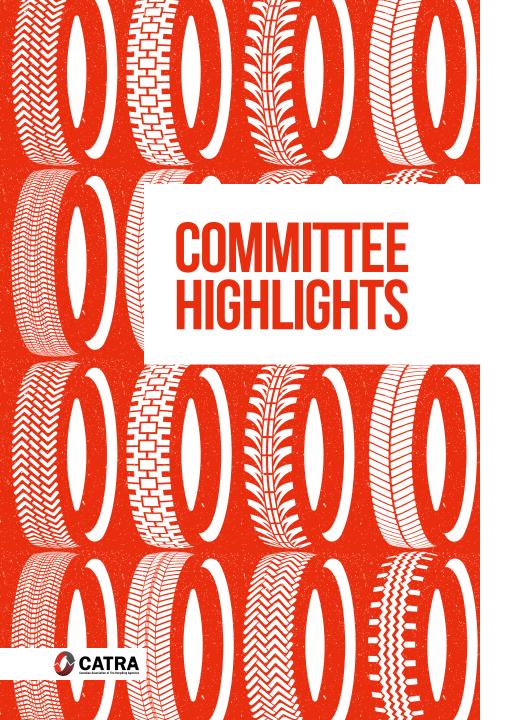
Ontario

Through their Service
Provider Awards, eTracks
recognize suppliers for their
professionalism, ease of doing
business, willingness to adapt to
regulatory changes, transparency
in business operations, and a
commitment to service delivery
excellence. The 2020 awards
were dispersed in December
2021 (due to the pandemic)
to the following organizations:

- Award of Excellence, Processor of the Year: Ideal Rubber Industries Corporation
- Award of Excellence, Hauler of the Year: CRM Hauling
- Award of Excellence, Hauling
 Northern Ontario: William
 Day Construction Ltd.
- Award of Excellence, Hauling - Central Ontario: Emterra Tire Recycling
- Award of Excellence, Hauling
 South Eastern Ontario:
 Trillium Tire
- Award of Excellence, Hauling - South Western Ontario: All Ontario Recycling

Manitoba

The TSM Community Demonstration and Innovations Grant Program provides 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 2021, TSM budgeted \$150,000 to assist with further market development, with 12 community projects being approved, 10 projects having proceeded, and \$123,634 was awarded in funding from Tire Stewardship Manitoba.



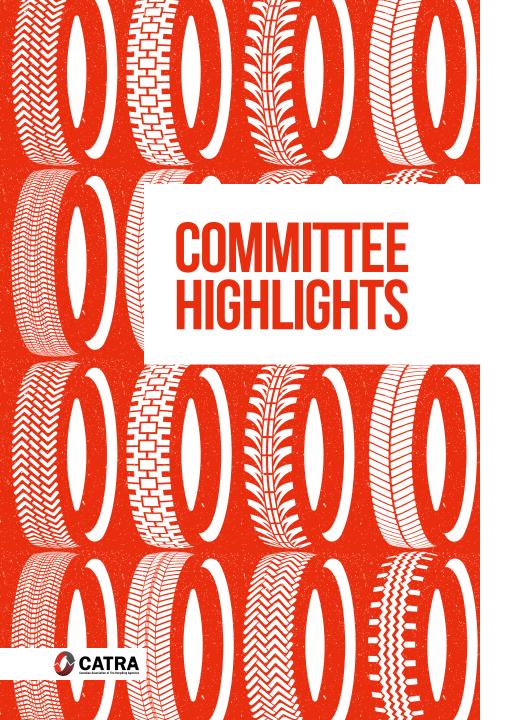
Below are just a portion of the activities and achievements of CATRA's standing committees in 2021.

MANAGEMENT

- Implemented a new budget process resulting in cost savings for 2021
- Monitored and assessed ongoing impacts of Covid-related restrictions, specifically related to planning of AGM 2021
- Engaged with TRAC's End of Life Tire (ELT) Committee to pursue collaboration in areas of mutual interest
- Oversaw Phase 2 of the Life Cycle Assessment Project to continue examining the environmental performance of management options - included a peer review for an ISO-compliant analysis
- Oversaw the succession of CATRA leadership resulting in Ontario taking the role of Host Province

DATA AND REPORTING

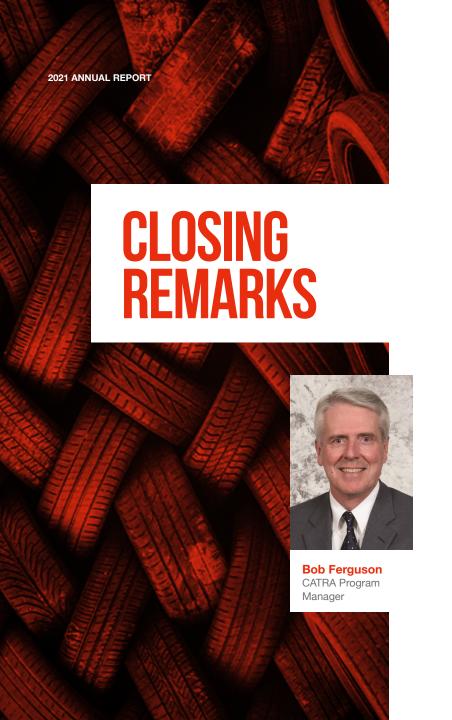
- Advanced the design of a data enhancement tool for Members to capture Canada's recycled rubber product incentive rates
- Provided oversight of the Harmonized Compliance Review (HCR)
 Program to evaluate financial compliance of tire retailers with a presence in multiple Canadian jurisdictions
- Maintained the CATRA reporting tool to collect key 2020 Member data
- Supported data needs for the 2021 CATRA Annual Report
- Provided industry data to Members and third parties as needed



Committee Highlights (cont)

COMMUNICATIONS

- · Published the 2020 CATRA Annual Report
- Phased out media monitoring service and did research into a replacement solution to be implemented in 2022
- Advanced Communications Plan objectives to better engage external audiences online – first steps were a Search Engine Optimization audit followed by a Search Audit to understand what information people commonly look for online
- Shared 2020 Member data on CATRA's website (national and provincial tire collection / diversion)
- Continued publishing web news articles to promote Member accomplishments, industry events, and other news
- · Issued informative monthly E-News
- Worked with summer students (through MSB) to add TDA and Crumb Rubber to the Products website page
- Monitored use of the public and internal websites and monthly E-News
- Continued to share knowledge through the Members' internal website



2021 was a year of many successes in Canadian tire recycling. As shown in this report, virtually 100% of used tires collected by our Members were recycled to create real value from what used to be known as waste. Indeed, tire recycling has been on the leading edge of what we now characterize as the 'circular economy' and CATRA members have been in the forefront of making it happen.

Examples abound of improvements and changes to the tire recycling landscape. Through investments in R & D and market development, Members continue to develop higher value markets for recycled rubber products while maintaining efficient, cost-effective operations. CATRA plays a key role in bringing together these high caliber individuals, with their cross-country experience, to exchange ideas and experiences that benefit everyone. An example is our Life Cycle Assessment project that is quantifying the environmental effects of tire recycling across all programs. Subjected to a critical review by external experts, complete and validated results will be shared by Members with their stakeholders to enable informed decision-making on investments in tire recycling practices.

A current area of real interest is the trend by manufacturers toward

using different and sustainable materials in tires. CATRA sees this as an opportunity to work with the tire manufacturing industry to help our Members' programs respond to potential changes and ensure the ongoing recyclability of scrap tires.

Leadership of CATRA initiatives draws on working groups and committees with representation across Canada. The Communications Committee is working to make improvement to the CATRA web site, notably to better serve the needs of our external stakeholders while continuing to be the go-to resource for data and information about Canadian tire recycling. Additionally, our Data & Reporting committee has launched an initiative to tighten up the consistency of data gathered from Member organizations. By presenting data that can be verified as consistent and current, we reinforce Canada's reputation as "the best" in tire recycling.

Never ones to rest on their laurels as world leaders in tire recycling, CATRA Members have launched into 2022 with the will, as always, to find ways to do things even better. To this end, CATRA looks forward to another year of supporting Members through activities and projects that deliver results that raise the bar for tire recycling in Canada!



MANAGEMENT

COMMITTEE

Brett Eckstein, MB - Chair Jeff MacCallum, NS Caroline McAuley, AB Stéphane Devernal, QC

DATA & REPORTING COMMITTEE

Mike Solkoski, MB - Chair Lee Heidecker, AB Frédéric Dutil, QC

COMMUNICATIONS COMMITTEE

Brett Eckstein, MB - Chair Jamie Seamans, NB Elizabeth Gray, AB Jayme Galloway, MB Melissa Carlaw, ON