

**FREE WEBINAR**

# TACKLING TIRE WASTE: EPR SOLUTIONS AND SUCCESS STORIES



**SPEAKERS:**

**Suna Bayrakal**

Product Stewardship Institute

**Tom Metzner**

Connecticut Dept. of Energy and Env. Protection

**Steve Meldrum**

eTracks Tire Management Systems

**Barry Takallou**

Crumb Rubber Manufacturers

 March 20, 2024

 1:00 - 2:30 EST

**MODERATED BY:**

Scott Cassel, CEO  
and Founder of PSI

**PRESENTED BY:**





# PRODUCT STEWARDSHIP INSTITUTE



# PSI Spring 2024 EPR Webinar Series



EPR, Material Extraction, and Lifecycle Impacts



U.S. Paint EPR Laws and Programs



Vapes and EPR Policy



Consistency in Packaging EPR



**NERC**

**Northeast Recycling Council**

## Anaerobic Digestion Facilities: Operators' Perspectives on Siting and More

March 27, 1:00-2:30 PM ET

## Environmental Justice in Anaerobic Digestion: Green Solutions, Just Outcomes

April 10, 1:00-2:00 PM ET

## NERC Spring 2024 Conference: Building Dynamic Solutions

April 30-May 1

### *Keynote Speakers*

- Rey Banatao, X – The Moonshot Factory, Google
- Jennifer Louie, Closed Loop Partners

### *New Reports*

- Paper Recycling Capacity in North America
- Quarterly Northeast Material Recovery Facilities (MRF) Commodity Values
- Glass Used As Alternative Daily Cover in Northeast U.S. & Quebec



**PRODUCT  
STEWARDSHIP  
INSTITUTE**



**Connecticut**  
Department of Energy &  
Environmental Protection



**Suna Bayrakal** – Product Stewardship  
Institute

**Tom Metzner** – CT Department of Energy  
and Environmental Protection

**Steve Meldrum** – eTracks Tire  
Management Systems



**Barry Takallou** – Crumb Rubber  
Manufacturers

# Tacking Tire Waste:

## An Overview of Problems and EPR Solutions

March 20, 2024

**Suna Bayrakal**

Director, Policy and Programs, Product Stewardship Institute



**PRODUCT  
STEWARDSHIP  
INSTITUTE**

# What is the problem?

**270+ million US tires discarded per year**

## **Stockpiles/Illegal Dumping:**

- fire hazards
- mosquito-borne illness
- soil contamination

**32% burned** as tire-derived fuel (TDF) and **17% land disposed**

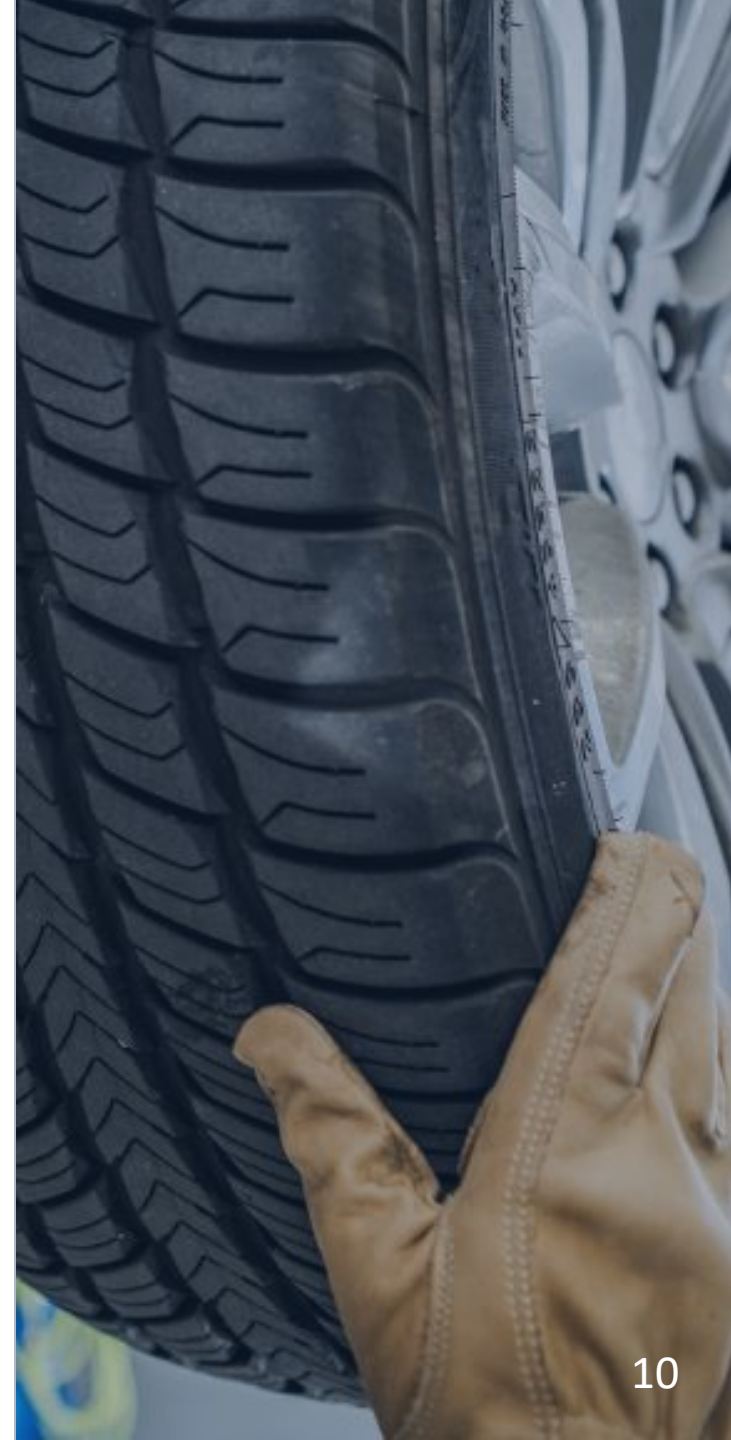


# Even though...

**Retreading** each truck tire can save 15 gal of oil and 40 lbs of materials (e.g., rubber, steel)

## **Recycling and Retreading**

- Recovers valuable materials
- Reduces need to extract virgin materials
- Reduces GHG emissions and energy use
- Creates green jobs



# Why Tires EPR?

**Over 30 states have mandated consumer fees that help clean up illegal tire dumps **BUT, unlike EPR, these programs do not:****

- Make recycling convenient and accessible statewide
- Encourage retread or recycling through performance goals
- Raise awareness about recycling/reuse/retreading
- Sustainably fund management of unwanted tires

**Across Europe and Canada, tires EPR has proven successful in**

- Reusing, retreading, and recycling tires
- Creating jobs
- Reducing illegal dumping



# EPR for Tires: A Sustainable Solution

- Producers share responsibility and burden of end-of-life management
- Stewardship program formed
- Sustainable funding
- Performance targets
- Collection convenience standards
- Outreach and Education
- Annual reporting



# U.S. Tire EPR Legislation

## Laws

- Connecticut ([enacted in 2023](#))

## 2024 Bills

- Vermont: [H 628](#) / [S 273](#)
- Virginia: [SB 414](#)

## Previous Bills

- Connecticut: Bills in 2021, 2017, and 2015
- Vermont: Bills in 2017, 2016, and 2015



# EPR for Tires in Europe

20+ European countries have adopted tire EPR programs

European Tyre & Rubber Manufacturers' Association says:

- EPR "appears to be the **most suitable and robust** for addressing and resolving end of life tyre arisings, in a sustainable manner for the long term, and to achieve a 100% recovery rate, in the most economical way."
- "Countries where a producer responsibility system has been operating for over 10 years have **recovery rates of 100%** and **stockpiles have been eliminated.**"
- "Tyre manufacturers have demonstrated a clear **preference** for [the EPR] system and have taken the necessary steps to implement it. EPR is today the **most widespread system** in Europe" to manage end-of-life tires.



# How has PSI advanced EPR for tires?

- Tire Stewardship Stakeholder Dialogue (2004)
- National Tire Stewardship Stakeholder Dialogue (2015)
- Tire Stewardship Briefing Document (2015)
- Tire Webinars



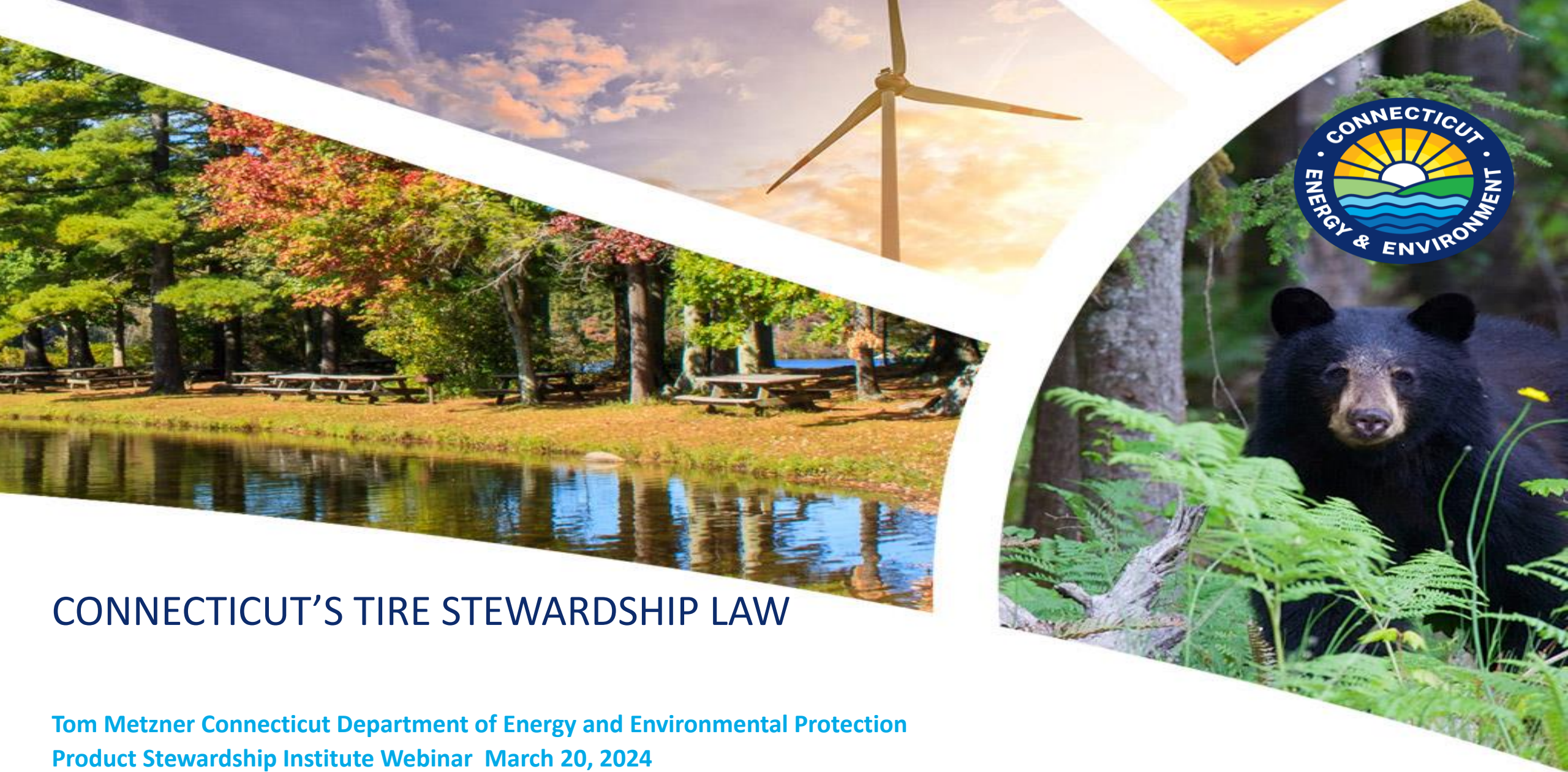
**THANK  
YOU!**

## **Suna Bayrakal**

*Director, Policy & Programs*  
Product Stewardship Institute

617-236-4886

[suna@productstewardship.us](mailto:suna@productstewardship.us)



# CONNECTICUT'S TIRE STEWARDSHIP LAW

**Tom Metzner Connecticut Department of Energy and Environmental Protection  
Product Stewardship Institute Webinar March 20, 2024**

# DRIVERS FOR PURSUING TIRE EPR IN CONNECTICUT

- Address illegal tire dumping
  - Save municipalities money
  - Promote higher end markets

Trumbull, CT May 2023



# Recent Illegal Dumping Cases in Connecticut

**DEEP dealing with truckload of used tires illegally dumped at Indian Well State Park in Shelton**

Police: Two men accused of illegally dumping nearly 100 tires - Naugatuck

**Trumbull took 8 months and spent nearly \$50,000 to remove illegally dumped tires at Old Mine Park**

Illegal tire dumping costing Hamden, cluttering neighborhoods

NOT JUST CONNECTICUT

DC's Tire-Dumping Epidemic

**Parkway Village illegal tire dumping site too much for neighborhood to clean - Memphis**

**Officials investigate illegal dumping of tires in Detroit**

**Man charged for illegally dumping about 500 tires across Springfield**



# BACKGROUND

PSI tire dialogue in 2015

Ran Tire EPR bills a few times  
between 2017 and 2022

Tire EPR passed in 2023 despite  
strong opposition from industry

Stakeholder dialogue in  
January 2024



# AN ACT CONCERNING EXTENDED PRODUCER RESPONSIBILITY FOR TIRES (PUBLIC ACT 23-62)

## Key Provisions

- Covered tires
- Definition of Brand Owner
- Covered entities
- Submission of a plan
- Implementation of the approved plan
- Submit annual reports



# WHICH TIRES ARE COVERED?

## Includes

- Passenger car
- Motor cycles
- Trucks
- Busses
- Non-commercial aircraft
- Agricultural, mining, logging, and industrial
- “vehicle that provides mobility” Golf carts? ATVs?



## Does Not Include

- Bicycle tires
- Toys
- Commercial aircraft
- Personal mobility devices – scooters, wheelchairs



# COVERED ENTITIES

Covered entities are “any permitted transfer station, tire retailer, car dealership, automotive garage, private or public sector fleet maintenance garage or other location identified in the approved stewardship plan”

Covered entities are not required to participate but stewardship plan must include enough locations to provide for free and convenient access.



# PLAN REQUIREMENTS

- Establish a state-wide collection system utilizing covered entities
- Provide access to the collection system to the public, free of charge, for the drop-off of discarded tires
- Ensure discarded tires are picked up from the collection system and transported for recycling



# PLAN REQUIREMENTS

- Ensure all discarded tires collected in the collection system are resold or recycled
- Provide storage containers
- Implement public education
- Assist in market development to achieve performance goals
- Finance all program activities solely through producer funding



# WHY HASN'T TIRE EPR TAKEN OFF IN THE US?

Vermont, Virginia and Connecticut are the only states to have proposed tire EPR legislation

33 States have state run tire programs based on a fee, usually \$1 - \$2 per tire for:

- Cleanup of legacy piles

- Market development

- Amnesty days

- Studies on Rubber Modified Asphalt

- Administration

Illegal Tire Dumping Persists in states with state run programs and those without because neither addresses the root cause – avoidance of tipping fees

Tire EPR in Canada has a proven track record of effectively eliminating illegal dumping.



# *Tire Recycling Frameworks & Success Factors*

*March 20<sup>th</sup>, 2024*

*Steve Meldrum, CEO, eTracks*

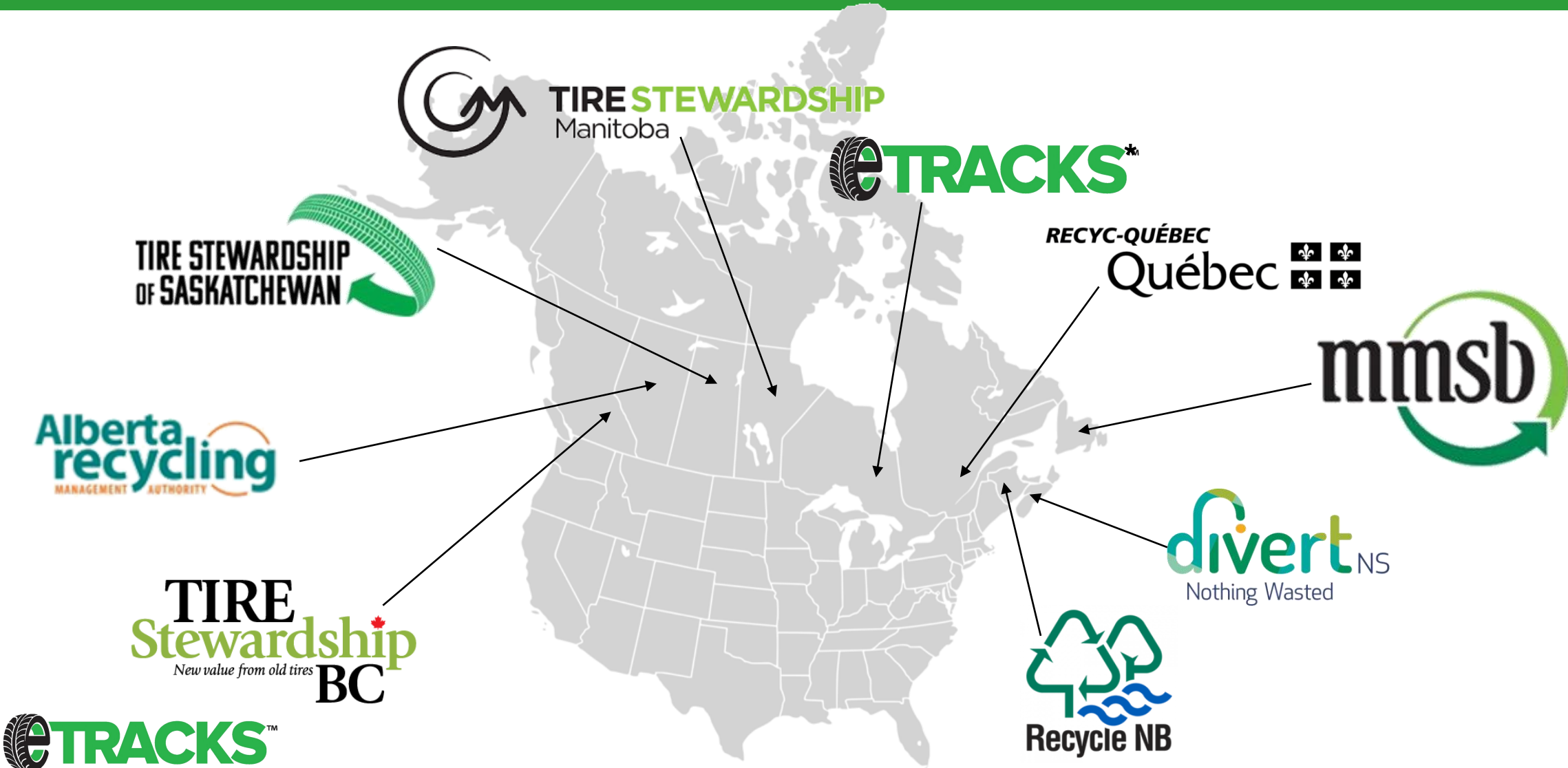
# About eTracks...

- Incorporated under the Canada Not-For-Profit Corporations Act in 2017
- Governed by an independent Board of Directors
- Originally created by the Tire and Rubber Association of Canada (TRAC) to meet the needs of its members and other obligated tire producers under the RRCEA
- Largest tire PRO in Ontario (~13M PTE or ~143,000 tons Collected and Processed)
- Focused on the responsible and ethical recovery of used tires to ensure tire producers meet their collection and resource recovery targets.
- PRO services include: a) establishing and operating a compliant collection system (i.e. pickup, hauling, delivery of end of life tires), b) processing (crumbing, retreading, reuse of EOL tires) and c) reporting for the largest tire manufacturers, importers and OEM's

Guided by our tagline of Responsible, Reliable and Fair business practices.



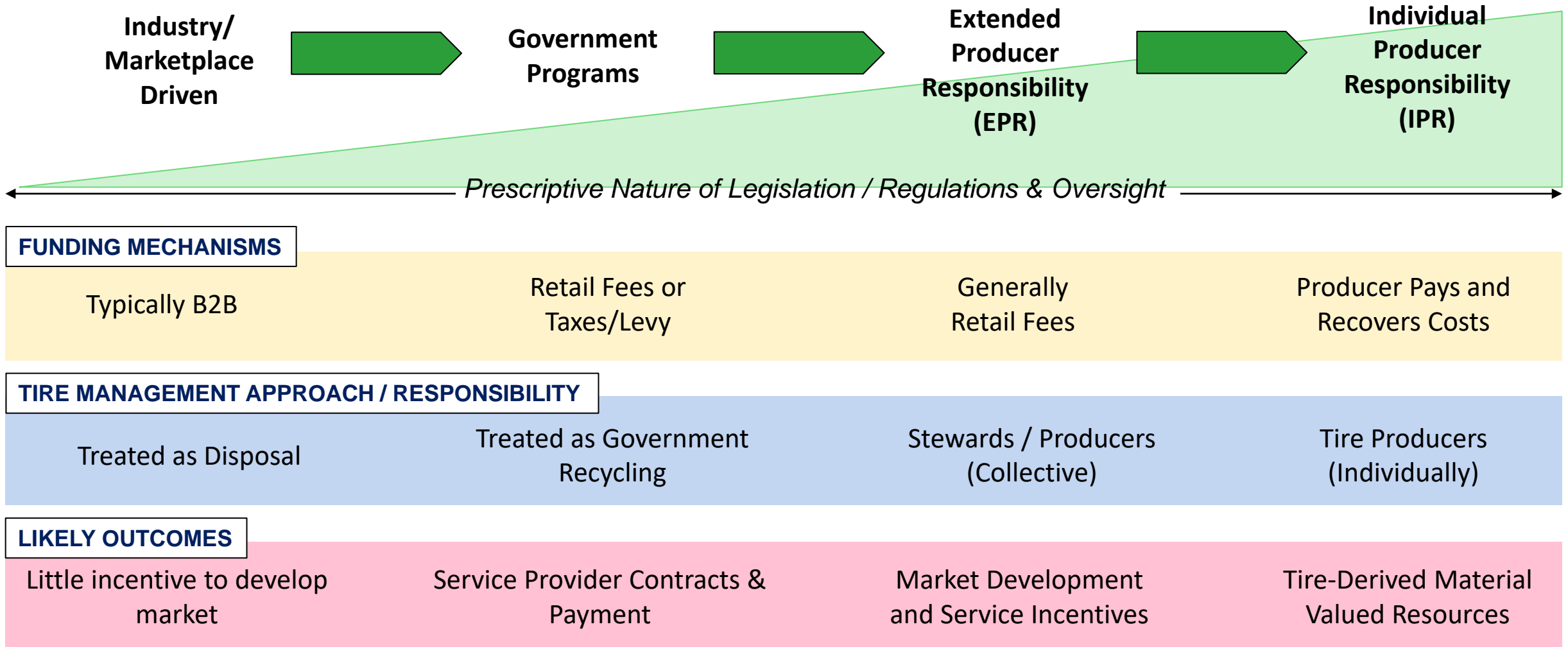
# Let's get our bearings..



# Let's get our bearings..



# Different types of Tire Recycling Programs



Note: these are generalization as each regulatory regime is developed to address specific regions

# Different types of Tire Recycling Programs

									
Industry/ Marketplace Driven									
Government		<input type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Extended Producer Responsibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Individual Producer Responsibility					<input checked="" type="checkbox"/>				

# Key Elements of Programs & Harmonization

## What is a Tire?

- On-Road Tires: PLT, MT
- Off the Road (OTR) on Vehicles: construction, mining/forestry, ATVs,
- Other OTR: Bike, Industrial, Aviation, Power Washers, Snow Blowers, Lawnmowers
- Pneumatic only or solid

## Who/what is a Producer or Steward?

- Retailer
- Tire Manufacturer
- Equipment Manufacturer with Tires
- Importer of tires or equipment
- Within State or USA

## What are acceptable end markets?

- Landfill, Burning
- Tire Derived Fuel
- Sport field infill
- Crumbing and rubber moulded products and packaging
- Retreading and blasting mats
- Reuse
- Rubber modified asphalt
- Pyrolysis

# Key Elements of Programs & Harmonization

## Performance Metrics

- Annual Diversion Rate (units or weight of tires collected / units or weight of tires sold annually)
- Lifetime Diversion Rate (units or weight of tires collected / units or weight of tires sold 3-5 years prior)
- Resource Recovery Rate (weight of TD product sent for beneficial use / weight of tires collected annually)
- Program Cost per Capita
- Program Revenue per Capita
- Public awareness changes over time
- Collection Site Accessibility

# Questions



# Benefits of Tire EPR Management Programs

Product Stewardship Institute, Inc.  
Tire EPR Webinar

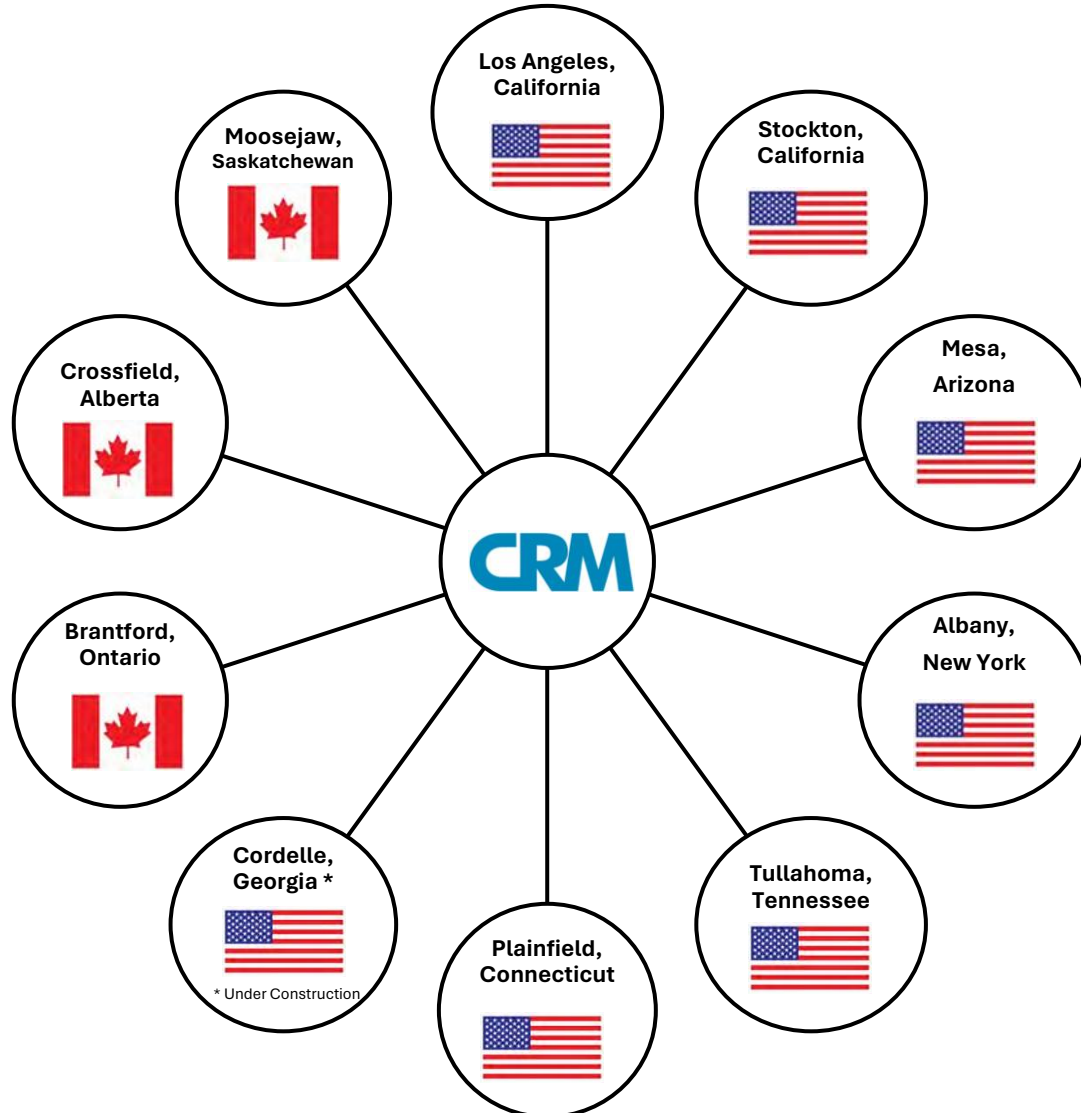
By:

H. Barry Takallou, Ph.D., P.E.  
President & CEO  
CRM Co, LLC  
(949) 887-2258  
[btakallou@crmrubber.com](mailto:btakallou@crmrubber.com)

March 20, 2024



# CRM Background



- Established in 1998 with same ownership for past 25 years.
- 7 tire recycling facilities in the United States and 3 in Canada.
- CRM Canadian recycling facilities have operated under EPR, IPR and Government run Stewardship programs since 2010.

# North America's Leading Crumb Rubber Manufacturer (CRM)



Currently, CRM recycles over 30 million tires annually for use in Rubber Modified Asphalt Pavements, Synthetic Turf, and Rubber Molded Product industries.



Every mile of Rubberized Asphalt Road recycles 2,000 scrap tires.



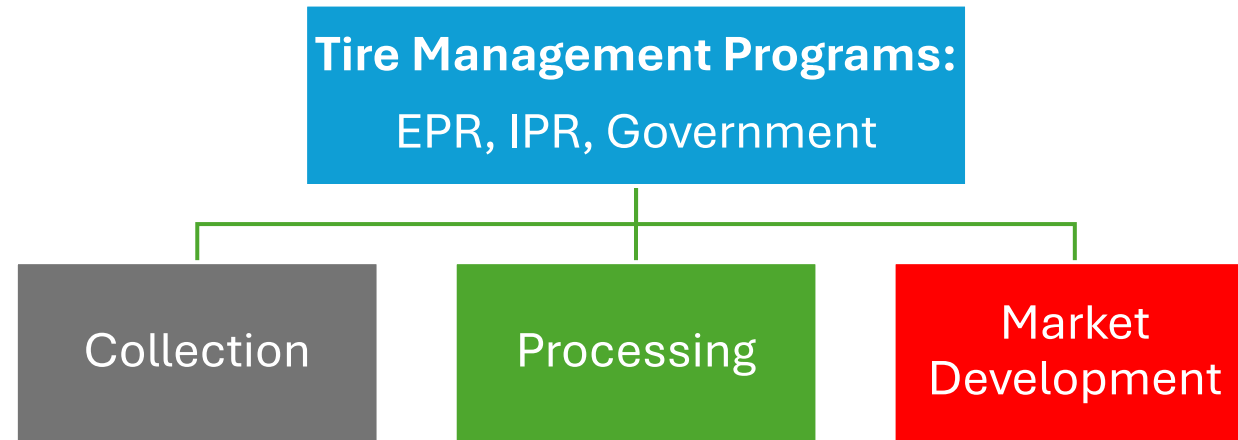
25,000 recycled scrap tires go into each field.



Rubber flooring mats are great for office, residential, hospital and gyms.

# Types of Tire Management Programs

---



- Tire Management Programs are typically based on Market-Push, where programs provide incentives to Haulers, Processors and Manufacturers as a short-term solution to increase recycling of scrap tires.
- A common problem shared amongst the Tire Management Programs is the lack of focus on development of local sustainable markets.

# Benefits of Tire EPR Management Programs



A well established EPR Tire Management Program can benefit consumers, municipalities, environmental agencies and the tire recycling industry.

## Consumers

- EPR can reduce eco fee and disposal fees charged to consumers.
- Consumers have a place to dispose their scrap tires.

## Local & State Environmental Agencies

- Eliminates illegal dumping & diverts tires from landfills.
- Establishes chain-of-custody of scrap tires from point of generation to end use.
- EPR brings efficiencies and reduction in GHG Emissions.

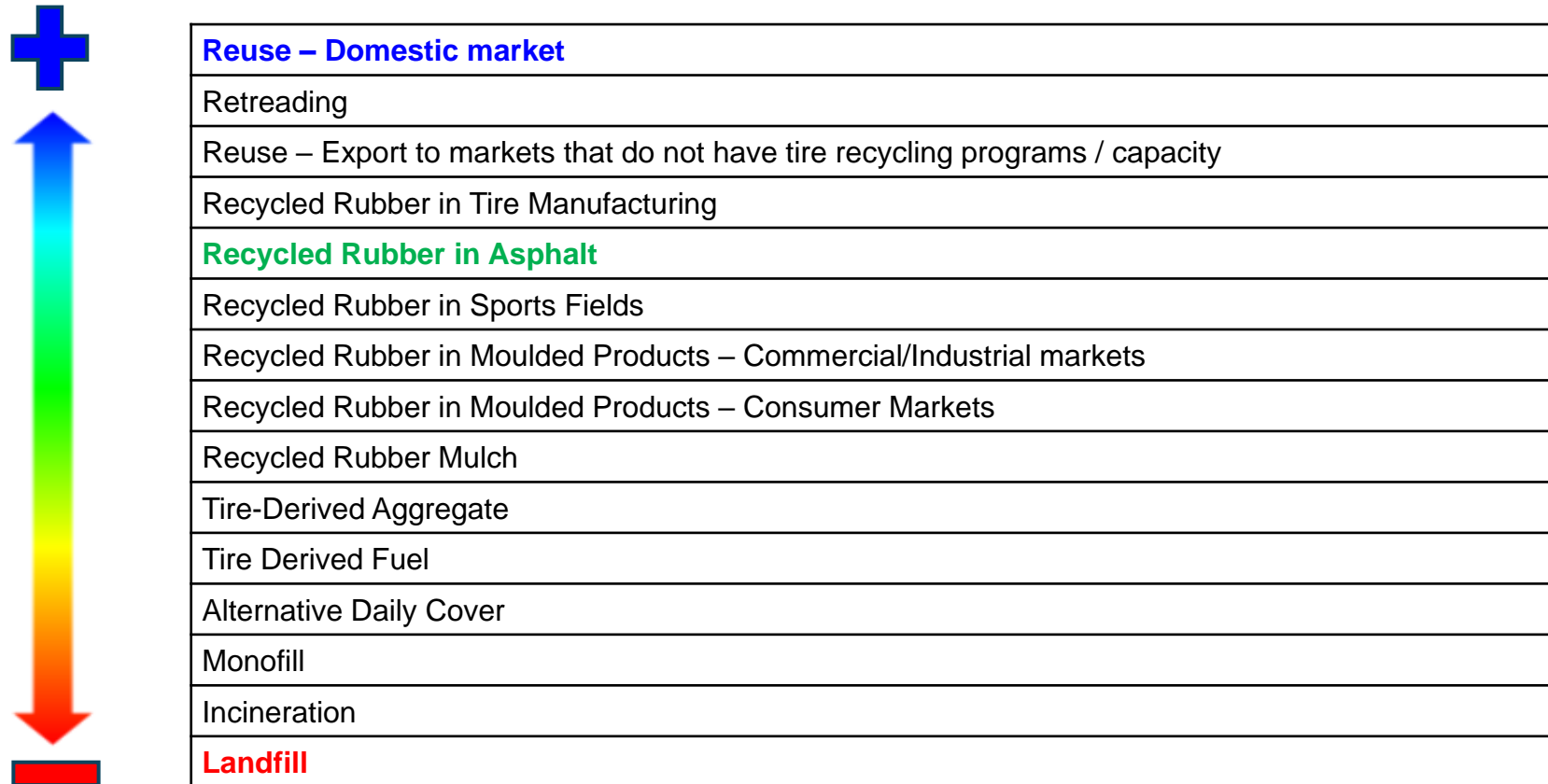
## Industry

- Tire retail stores have assurance that its scrap tires are collected and recycled at consistent prices statewide.
- Establishes an even-playing field for tire haulers.
- Tire Recyclers can be assured of the volume of scrap tires and a focus on developing local markets.

# Scrap Tire Market Circularity Continuum



Markets for scrap tires present different degrees of opportunity for supporting the circular economy. This Continuum is reflected below:





# A Major Global Sustainable Solution for ELT Management is Rubber Modified Asphalt (RMA)

---



# Advantages of RMA for ELT Management

---



- It is a local sustainable circular economy
- It addresses scrap tire issues while also improving road performance
- It can dramatically increase the recycling of scrap tires in a short amount of time



# Market Potential of RMA Pavements



- Approximately 430 million tons of Hot mix asphalt is used in U.S. roadway systems and 280 million scrap tires are generated in the U.S. annually.
- Potentially, by modifying just 25% of asphalt paved annually, all of the scrap tires generated each year can be recycled.



# RMA Pavements are Proven Technology

---



- California has mandated the use of RMA since 2006 and since then it has successfully paved approximately 50,000 lane miles of its roadway system with asphalt rubber over the past 20 years.
- Municipalities, the DOT, and asphalt contractors report that the use of RMA increases the life of pavements, reduces maintenance cost, and saves taxpayers money.



**Q&A**



# Thank you!



**PRODUCT  
STEWARDSHIP  
INSTITUTE**



# PSI Spring 2024 EPR Webinar Series



EPR, Material Extraction, and Lifecycle Impacts



U.S. Paint EPR Laws and Programs



Vapes and EPR Policy



Consistency in Packaging EPR

# What can PSI do for you?

## Partnership

*For producers, recyclers, retailers, NGOs, academics, international governments*



Market intelligence, legislative tracking, newsletters



Business development, webinar sponsorships, promotion



Strategic alliances, policy analysis, briefing calls



Recognition as a leader in product stewardship

## Membership

*For state and local government agencies*



Policy strategy calls, legislative updates and tracking



Free webinars, newsletters, and alerts



Curated resources and content



Networking, conference discounts, and more

## Consulting

*Customizable projects*



Research, pilot programs, evaluation



Facilitation and consensus building



Education



Policy development

# Your Feedback Matters

