



Advancing Tire Stewardship in the United States
MEETING SUMMARY
January 21 & 22, 2015—Hartford, CT

Attendees

More than 160 local, state, and federal government officials, recyclers, retailers, and other key stakeholders attended the meeting, with about half attending in person and the other half participating via live web streaming (see attendee list). Government officials participating represented 22 states.

Meeting Materials

Meeting materials are available on PSI's 2015 Tire Stewardship Dialogue Meeting web-site (http://www.productstewardship.us/?page=2015_Tires_Dialogue). We encourage you to consult the PowerPoint presentations when reviewing this summary.

Welcoming Remarks

Jessie Stratton, Connecticut Department of Energy and Environmental Protection (CT DEEP) Policy Director, welcomed attendees to the meeting. She indicated that tires were one of ten priority materials in CT and emphasized the collaborative process as essential to the success of recycling programs.

Meeting Overview

Scott Cassel of the Product Stewardship Institute (PSI) thanked meeting sponsors and reported that the size of the group was the largest ever for a PSI dialogue meeting, reflecting significant interest in the issue of scrap tire management. Scott reported that 90 percent of the 65 respondents to a 2014 PSI survey of state/local governments and watershed protection groups said that they had a scrap tire dumping problem. He outlined the contents of PSI's briefing document and asked for comments and suggested revisions by January 30. Scott also laid out the expected meeting outcomes and provided an overview of the meeting agenda. Scott highlighted three basic problems mentioned by those from government, industry, and environmental groups whom PSI interviewed prior to the meeting: illegal dumping, market challenges for higher end uses, and lack of sustainable funding. The project goals are as follows:

- **goal 1:** reduce the illegal dumping of scrap tires;
- **goal 2:** attain the highest value possible for scrap tires while protecting human health and the environment (e.g., follow the hierarchy of options: reduce, reuse/retread, recycle, reclaim for tire-derived fuel, proper disposal)
- **goal 3:** provide adequate and sustainable funding to reduce illegal dumping and for higher and better use of scrap tires.

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Fees in Practice

Michael Blumenthal (Marshay Inc.) indicated that, since 1985, many states have enacted laws requiring a state fee on on-road scrap tires that has been used to fund stockpile clean-ups, market development, and government staffing and enforcement of scrap tire regulations. Thirty-seven states currently have a fee and six states have ended their fee program. Key issues include: 1) the tire fee, though not a tax, is often considered one; 2) fees have been used to fund non-tire activities; 3) retailer charges are sometimes unregulated and often confused with state fees despite being distinct.

David Deen (remote presentation)

David Deen, VT State Representative and Chair of the House Committee on Fish, Wildlife and Water Resources, and a staff member of the Connecticut River Watershed Council, discussed a recently introduced VT EPR bill for tires, Bill H.36 (<http://legislature.vermont.gov/assets/Documents/2016/Docs/BILLS/H-0036/H-0036%20As%20Introduced.pdf>). He emphasized that VT is familiar and comfortable with EPR, having EPR laws on batteries, electronics, paint, thermostats, and fluorescent lamps.

Background/Stakeholder Perspectives

Government Perspectives

Tom Metzner (CT DEEP) indicated that CT's goals are to direct tires to recycling markets and away from TDF, create recycling jobs in CT, minimize illegal dumping, and avoid a state funded program. Key challenges include obtaining accurate data on illegal dumping, and that the relatively low cost of TDF directs scrap tires away from the more expensive, higher end use markets. The CT DEEP supports EPR for tires, which is currently used in CT to address waste management in electronics, paint, thermostats, and mattresses.

Jennifer Holliday (Chittenden County, VT) identified tire piles, government costs, and market limitations as key challenges. VT is interested in EPR for tires: 1) to reduce illegal dumping, and cover state and local government tire management costs; 2) to expand markets and higher end uses of tires; 3) due to lack of support in the legislature for fees; and 4) fees tend to get to the problem of tire dumping after it has occurred. Because VT is a small state, they hope to work regionally to develop markets. Bill H.36, VT's tire EPR bill, includes a performance goal to recycle or reuse (not TDF) at least 50 percent of collected scrap tires.

Andy Fisk (Connecticut River Watershed Council, CRWC) provided a summary of clean-up efforts over 120 miles of river through four states (CT, MA, NH, and VT). CRWC has seen a significant number of small tire dumps and has pulled almost 7,000 tires in 15 years. CRWC supports a policy solution to avoid illegal dumping and having to spend funds on annual clean-ups; it also has an interest in increasing scrap tire markets.

Roger Wolfe (CT DEEP Wetland Habitat and Mosquito Management Program) provided an overview of the role of discarded tires in public health as a source of mosquitoes and mosquito-borne illness. Key challenges include: 1) the frequency and ease of movement of scrap tires from location to location; and 2) ensuring that tires are stored, covered, and cut in half or holes drilled in them to reduce the harboring of mosquito eggs.

Manufacturer and Recycler Perspectives

John Sheerin (Rubber Manufacturers Association, RMA) indicated that, in 2013, 95.9 percent of scrap tires were diverted from landfills in the U.S. with 53 percent going to TDF and 24 percent to ground rubber. Most tires in New England are consumed as TDF in Maine pulp and paper mills. The challenges in Connecticut are an absence of markets and a funding mechanism. RMA believes that other than Maine and Vermont, stockpiles are not a problem in New England, although there have been difficulties obtaining CT data. Illegal dumping is caused by theft at retail locations. Each state has a different program to manage scrap tires (e.g., fees, storage regulations, hauler and processor requirements, grants, enforcement, etc.) and they vary in effectiveness. The overall solution is market diversity, and more and better uses. Resource challenges are

also affecting some state programs (e.g., fee phase out, budget limitations, tire funds used for other state purposes). Successful programs are those that ban whole tires from landfills, regulate and enforce against haulers, and develop markets.

Dick Gust (Tire Industry Association and Liberty Tire Recycling) emphasized the need for market diversity but indicated that they would prefer to see higher value end uses as it brings in more profit. Main challenges include: 1) increasing markets for higher end products (more crumb rubber and less TDF); and 2) better security and regulations to prevent scrap tire theft at retail, which leads to illegal dumping. Potential solutions include promoting scrap tires as a resource rather than a waste and increasing state surveillance and enforcement to reduce theft and dumping.

EPR in Practice – U.S.

Scott Cassel (PSI) provided an overview of product stewardship and EPR, and indicated that EPR for tires is in place in many countries, including Canada and 19 countries in Europe. Distinctions were made between: 1) product stewardship (under which the current state fee programs fall), which can be voluntary or mandatory, and have multiple funding mechanisms and potential actors; and 2) EPR, which is mandatory and manufacturer-funded and managed. Three product stewardship funding mechanisms were discussed and contrasted – advanced recycling fee, eco-fee, and cost internalization.

Ontario Tire Stewardship Program

Carmelina Macario (Waste Diversion Ontario, WDO) indicated that successes of Ontario's EPR for tires program include: 1) meeting goals of landfill diversion and reducing illegal dumping; 2) consistently exceeding recycling targets; 3) tracking scrap tires; and 4) expanded in-province processing capacity. Challenges include: 1) financial difficulties at the start of the program due to an incorrect estimation of scrap tires received; 2) lack of consistency across Canada in product scope, fees, and how tires are permitted to be managed (e.g., TDF); 3) access to data to verify accuracy of information reported; and 4) public perception that the fee is a tax and the program is government-run. Recommendations include: 1) provide flexibility in program design to accommodate new information; 2) harmonize across jurisdictions; 3) enhanced communication regarding the fee before starting the program; and 4) adequate consumer collection convenience. Roles and responsibilities include: 1) manufacturers pay Ontario Tire Stewardship (OTS) to manage tire collection and recycling on their behalf; 2) OTS manages operations, supports market development, educates tire stewards and the public, and reports results to WDO; 3) WDO monitors program performance, reports to the Ontario Ministry, approves changes to program operations, and resolves disputes; and 4) service providers registering with the program and signing a contract, reporting, and managing scrap tires in accordance with the contract.

Andrew Horsman (Ontario Tire Stewardship, OTS) described OTS' stewardship program, which includes handling, storage, collection, transportation, reuse, processing, and recycling. The provincial law does not allow TDF or landfilling. Andrew emphasized that stakeholders should determine their goals, and design a program to meet their intended outcomes. Ontario's program is based on a series of incentives to collectors, processors (for transportation and processing), and manufacturers of products made with recycled rubber. Successes include: 1) that the program has encouraged competition among transport, processing, and recycling businesses, expanding two-fold in each sector; and 2) virtual elimination of illegal dumps and stockpiles. Challenges are: 1) high cost of the program due to desire for "immediate results;" and 2) government's preoccupation with consumer perception of fees which has affected program operations and stability. Conclusions include the following: 1) sound policy and program design must be based on solid data; and 2) the law must be enforced.

Market Development

John Sheerin (RMA) discussed trends such as: 1) TDF market declined with 2008 recession but has since come back; 2) civil engineering uses declined significantly since 2005; and 3) ground rubber has decreased since 2009. For New England: 1) current markets are working and include TDF, punched products, tire derived aggregate, and other smaller markets; 2) reliance on two paper mills in ME is cause for attention over the long term; 3) TDF plant in Sterling, CT may reopen to accept at least some tires; and 4) other new end users are entering the market. Recommendations for New England include: 1) market diversity; and 2) market development of rubber modified asphalt, molded/extruded products, automotive parts, and tire-derived aggregate. Market development should consider life cycle analysis and support closed loop recycling (e.g., rubber modified asphalt can be recycled).

Barry Takallou (Crumb Rubber Manufacturers, CRM) noted that 2014 showed the highest growth in crumb rubber applications. Key challenges include: 1) access to scrap tires; 2) varying levels of social responsibility by generators; (3) unlevel playing field due to subsidized markets; and (4) negative media and public perception regarding health concerns about crumb rubber on playgrounds and fields. Lower energy costs will favor crumb rubber use over energy recovery in near future.

Henri Hillmann (Tri-State Flexi-Pave) described Flexi-Pave's applications, including trails, sidewalks, tree surrounds, roadside/runway erosion, storm water management, and embankment stabilization. Key challenges include: 1) product approval; 2) recognition by government agencies, architects, landscape architects, and engineers; and 3) cost (two to three times that of traditional pavement, but it lasts longer and provides storm water management, vegetation control, and phosphate filtration). Flexi-pave is recyclable.

Denise Kennedy (DK Enterprises) indicated that collaboration between the customer, manufacturer, tire-derived material supplier, product specifier, compounder, and testing facility is essential to the development process for tire-derived products. She provided a link to CalRecycle's extensive Tire-Derived Product Catalog and suggested that state's support market development by creating their own catalog, establishing best management practices developing products, and giving grants.

Day 1 Summary – Facilitated Discussion

Scott Cassel (PSI) asked the group to provide comments pertaining to the three goals set out in the beginning of the meeting: (1) illegal dumping; (2) higher market uses; and (3) sustainable financing. Listed below are general areas of agreement, areas for further discussion, and other comments.

General Areas of Agreement

Illegal Dumping

- Theft of scrap tires from retail locations significantly contributes to illegal dumping, and greater enforcement is needed. Retailers can reduce theft of scrap tires by incorporating best management practices that address storage, security, and surveillance.
- There are no data on the relative magnitude of illegal dumping resulting from theft at retail, unscrupulous haulers, and end-of-life fees (which has less of an impact).
- Tires must be tracked with a manifest from generation to use and through end of life for the following reasons: 1) provides data on which to base system improvements; 2) indicates the diversity of scrap tire markets by tracking tire destination; 3) provides accountability for proper management of tires, and thus levels the playing field for haulers and processors; and 4) deters illegal dumping.

Data Needs

- There is a need for better data on tire piles and illegal dumping to identify the extent of the problem and the associated magnitude of funding required.

Market Development

- Rubber modified asphalt is a preferred market that should be more widely developed. We need to maintain diversified markets.
- Recyclers and product manufacturers should take the lead on promoting products by showcasing successful applications. Government should participate in the development of product specifications with manufacturers and recyclers (and/or reference standards developed by ISRI, ASTM, and other standard-setting organizations) to make it easier for products to get to market. Government should also adopt these specifications, streamline product approval processes, and actively seek to purchase tire-derived products.
- State-specific and regional considerations (distinct geographies, histories, and existing markets) are important when considering potential markets and obstacles. We should develop a solution for the northeast region.

Sustainable Financing

- Many state programs do not provide sustainable financing either because state funds generated by fees are used for non-tire purposes or because the amount of the fee is not enough to cover all program requirements.
- State tire fees are not considered ARF systems since the funds generated are not used for recycling; recycling costs are often covered by retail charges.

Stakeholders

- Include additional stakeholders, including DOT representatives, highway supervisors, and end users of products.

Areas Requiring Further Discussion

Role of Government

- Manufacturers and processors generally believed that government's role should be extensive and include: licensing of collectors, haulers, and processors; administering manifest systems; enforcement; consumer education; promotion of collection opportunities; market development; providing grants to municipalities for collection and processing; and research to address public health questions about tire-derived products. Government officials believe that their role should be limited to program oversight and creating a level playing field through enforcement.

Tire-Derived Fuel

- Some stakeholders asserted that access to scrap tires and competition with TDF inhibits the growth of higher value markets, and that government should limit TDF to help increase market diversification. Others argued against limiting TDF or any existing market, and said that tires naturally go to higher value markets.

Market Competition

- Some stakeholders (e.g., recyclers) believe that EPR systems reduce competition for recyclers by placing greater control with manufacturers, which choose a few big winners but leave many smaller losers. Others stated that the EPR system for tires in Ontario and EPR systems on other products in Connecticut did not limit competition among haulers and recyclers, but fostered competition.
- Manufacturers and some recyclers believe that retail scrap tire recycling charges represent a "free market system" because both the charges to consumers and the charges retailers pay for scrap tire recycling are set by the market, whereas some EPR systems constrain the market by reducing the number of recyclers contracted to collect targeted materials. Others, including government officials,

believe that fee systems and EPR systems are both legislative structures within which a free market can operate.

Market Development

- Many stakeholders believe that TDF represents a viable market, even if its future in certain markets is uncertain, while other stakeholders believe that TDF is a barrier to the development of higher value markets, which require financial incentives or government intervention for greater promotion.

Sustainable Financing

- Manufacturers and some recyclers prefer a state fee/retail fee model for covering program costs, whereas some government agencies were interested in an EPR system. (Most governments managing existing fee programs appeared to be content with their current program, although they were interested in understanding EPR and how to make their programs better.)

Other Comments

- Environmental goals of the past (e.g., virtual elimination of large tire piles) should be reframed for the present (e.g., defining progress as cleaning up many smaller tire piles and developing higher value scrap tire uses).
- Consumers bear most costs of tire management through state fees and retailer charges, not municipalities.
- There is concern about potential health risks associated with the use of crumb rubber in synthetic turf and playgrounds. It is unclear whether potentially harmful substances are sufficiently encapsulated in this material.
- Some meeting participants felt that minimizing government involvement should be an explicit goal of any tire management strategy. “Product stewardship” involves varying levels of responsibility for anyone who interacts with the product throughout its life cycle. However, requiring that the primary financial responsibility lie with the consumer (through the manufacturers and brand owners) rather than with government (through tax payers) could reduce the impression that recycling fees are “just another tax,” and allow industry to run recycling programs, thus restricting government to roles of determining certain policy objectives and providing oversight.

Day 2 Meeting Summary

Scott Cassel (PSI) summarized the discussion from the first day and reviewed the agenda for Day 2. He also indicated that the morning would involve continuing the discussion from the previous afternoon, including a re-focusing on the three goals of reducing illegal dumping, striving for higher end uses, and sustainable financing. The agenda item entitled “Choosing a Scrap Tire Funding System” was replaced by a longer discussion on how to meet the three main goals. Information from that discussion is incorporated above as part of key takeaways.

Commissioner Rob Klee (CT DEEP) welcomed attendees to Day 2 and thanked them for their participation. He expressed his particular appreciation for industry’s attendance, as well as the importance of their experience and knowledge. He indicated that CT was one of the first states to construct waste-to-energy plants, but it is now a different era with new opportunities to pursue higher value uses for scrap material. CT is looking for solutions that reduce burdens on municipalities and generate job growth. The state has had great success with EPR for electronics, paint, and mattresses, and is interested in EPR for tires as well. The agency submitted tire EPR language to the Office of Policy and Management, which posted it on its website even though it is not a formal submission to the General Assembly. Only when the General Assembly raises the bill, is it officially a bill. Commissioner Klee emphasized the Department’s interest in convening this meeting to inform the agency’s understanding of the issue of scrap tire management. The

Commissioner stated that, while it would have been better to get stakeholder input prior to developing bill language, the timing of the meeting with the start of the legislative session did not allow this to happen, but that he still wanted to get the conversation started.

State EPR Tire Legislation and Elements of an EPR Bill for Tires

This portion of the meeting involved a discussion of elements of an EPR bill for tires and the possible options to consider within each element. The goal of the session was to develop a set of model bill elements for tire EPR that is streamlined and flexible enough to meet the unique and changing regulatory, political, and economic needs of multiple states. These model elements will help harmonize tire EPR legislation in the U.S., preventing a confusing patchwork of different programs across multiple states. Representatives from RMA, ISRI, and other companies made it clear that, while they do not support EPR, they would participate in the discussion.

- 1. Scope of Products:** The types of materials affected under the bill, including on-road tires (e.g., passenger, truck, bus, and RV tires) and off-the-road tires (e.g., agricultural equipment and off-road motorized vehicle tires).
 - **Ontario, Canada:** On-road and off-road tires
 - **U.S. Fee Laws:** On-road tires only
 - **VT EPR for Tires Bill (H.36):** Tires designed for on-road use on a motor vehicle which includes ATVs, motorcycles, farm tractors and trailers, and motor-driven cycles.

Suggested Model: Determine a "minimum" scope of products that must be included, and provide room for producers' plan(s) to add other products.

Comments/Discussion

Perspectives on this element ranged from: 1) a narrower scope of just passenger car and light truck tires; 2) a phased-in approach beginning with smaller tires and ultimately including all tires (favored by those states that believe they can more easily make statutory program changes); and 3) including all tires from the outset of the program (favored by states where statutory revisions are more difficult). In addition, the program should acknowledge that tire weight affects management costs (e.g., larger, heavier tires are more costly to manage).

- 2. Producer/Responsible Party:** Producer responsibility laws for tires can define responsible parties in a number of ways, and can specify which parties are exempt from the law. Participation may be required for the manufacturer, marketer, brand owner, first importer, or retailer.

Suggested Model: Typically includes manufacturers, brand owners, and first importers of tires.

Comments/Discussion:

Tire manufacturers prefer that scrap tire generators are the responsible party. Ontario's tire EPR program includes a responsible party hierarchy beginning with the vehicle manufacturer/original equipment manufacturer (OEM). If a vehicle manufacturer/OEM is not bringing a particular tire into the province, the brand owner (often the tire manufacturer, but sometimes the retailer) becomes the responsible party, followed by the first importer. By contrast, British Columbia's tire EPR program defines "producer" as the seller, distributor, trademark owner or licensee, or importer, but does not set forth a hierarchy beginning with the "first supplier" into the province. This inclusive approach reduces free ridership by creating an obligation for all parties involved in the new tire supply chain to participate in the development and operation of a scrap tire stewardship program.

- 3. Funding Mechanism:** This element may include a definition of program-related costs for which producers are responsible (e.g., prevent illegal dumping, tire pile cleanup, collection, transportation, recycling/disposal, education, market development, reporting, and agency administration). An EPR tire stewardship bill can be based on either cost internalization or an eco-fee.

Comments/Discussion:

Government officials wanted the full range of costs covered by the EPR system. Some emphasized that states need to know how many scrap tires are in piles and the associated cleanup cost before being able to develop a program.

- 4. Stewardship Organization:** Defines whether responsible parties must join a representative organization in complying with the law, or whether they may create and implement their own individual plan (i.e., “self-comply”). The bill must also set dates by which manufacturers must join stewardship organizations, and indicate whether multiple stewardship organizations are allowed.

Suggested Model: The model should allow states the option to choose whether to allow multiple stewardship organizations or require just one.

Comments/Discussion:

State governments tend to prefer fewer stewardship organizations because it reduces their administrative burden and is more efficient. Others believe that multiple stewardship organizations create greater competition and lowers costs.

- 5. Stewardship Plan Contents:** A key component to responsible parties meeting their legal requirements. Considered the program “roadmap,” and includes how the responsible party will ensure consumer convenience, meet performance goals, provide effective education and outreach, fund the program, etc.

Suggested Model: Legislation should outline the basic elements required in any plan and let manufacturers fill in details. State agency should be allowed to require plan modifications if performance or convenience standards are not met. Opportunities for public comment should be provided prior to plan approval. Basic elements include: list of producers and brands, method by which tires are collected, convenience standards, method of disposition, roles and responsibilities, education and outreach, reimbursement, performance goals, and tracking.

Comments/Discussion:

Suggestions included adding manifest tracking to the plan and indicating that tires are collected for free (to discourage illegal dumping). One issue is what level of a program change would trigger the need for a new plan to be submitted.

It was agreed that, with limited time remaining, it was more productive to take stock and discuss next steps than to continue examining the remaining elements of an EPR bill.

Taking Stock and Next Steps

Scott Cassel (PSI) asked participants if their meeting expectations had been met and the next steps they would like to see. Most believed that, while there were clear differences of opinion, there were also areas of agreement. Most said that they left the meeting with a greater understanding of scrap tire management issues, EPR, and stakeholder perspectives and priorities.

Scott asked how the group would like to provide input on the CT and VT tire EPR bills. It was agreed that this would occur as part of the legislative process. Even so, most in the group expressed an interest in continuing the discussion of key issues as a group since much had already been learned over the past two days. There might also be other states interested in the developments in CT and VT and in having a discussion on legislative concepts. Whether legislation is desired or not, it would be valuable to keep communication lines open for information exchange, and a mechanism is needed for that purpose. RMA's website is a valuable resource of information and RMA is open to being contacted at any time.

RMA stated that participation in the meeting was important for the organization even though it opposes EPR. PSI will follow up with state officials to determine their need for assistance on scrap tire management, and their interest in EPR and other funding mechanisms. PSI will also check in with other stakeholders about the meeting and next steps they suggest.