

MANITOBA SCRAP TIRE PLAN



Backgrounder and Discussion Paper

For Industry Stakeholders

June 2007

Prepared by Tire Stewardship Manitoba

EXECUTIVE SUMMARY

Manitoba Conservation introduced the Tire Stewardship Regulation, 2006 under the WRAP Act in November 2006, which will create a new scrap tire management system in the province. After a suitable transition period, the existing Tire Stewardship Board program will be phased out and replaced by the activities of Tire Stewardship Manitoba, a not-for-profit Industry Funding Organization.

Manitoba currently generates 835,000 scrap program tires annually. This equates to approximately 1.3 million PTE's (passenger tire equivalent) and costs \$2.7 million to remediate. In the new program, total tire units will increase to 900,000 scrap program tires and equate to 1.8 million PTE's with a cost of \$4.6 million to remediate. This dramatic increase in PTE's is the result of the inclusion of off-the-road tires.

The new scrap tire management program will extend to include all types of tires and tubes, including off-the-road tires, and will be designed to ensure that collection and processing service is available to all regions of the province, including historically under-serviced areas.

In early 2006, Tire Stewardship Manitoba initiated a comprehensive process of consultation with affected stakeholders, including municipal and consumer representatives, non-governmental organizations, and existing and potential haulers and processors. These initial consultations helped TSM to build the existing plan which was delivered to the Minister of Conservation on April 19, 2007. This current round of consultation will allow affected stakeholders to ask questions of the proponents and to submit comments to the Minister of Conservation before a final decision is rendered.

In order to sell tires in Manitoba, tire stewards must either participate in the program operated by Tire Stewardship Manitoba or must create and operate an equivalent program. Under the new program, a broader range of tires will be subject to environmental levies that more accurately reflect recycling costs, and transportation incentives will be separated from processing incentives to better capture and reflect the true costs of collection, transportation and processing of all types of tires from all points of origin in the province.

Tire Stewardship Manitoba will be required to report annually to government on the state and progress of the scrap tire management program, and will have the ability to dynamically adjust program elements to address required enhancements and improvements. It should be anticipated that Tire Stewardship Manitoba, benefiting from experience gained, may desire to modify this plan in accordance with the regulation.

None of these new program requirements will come into effect until provisions contained in this business plan are made final following public consultation and the plan is approved by government.

Tire Stewardship Manitoba

The current Manitoba Tire Stewardship Board, which has operated successfully since 1995 under the existing regulation will be phased out in an orderly, seamless transition once the TSM Business Plan is approved, expected sometime this summer.

Tire Stewardship Manitoba (TSM) is the new not-for-profit Industry Funding Organization comprised of four major organizations: Manitoba Motor Dealers Association, Retail Council of Canada, The Rubber Association of Canada and Western Canada Tire Dealers. TSM is responsible for developing and implementing the scrap tire business plan and to work co-operatively with Green Manitoba and Manitoba Conservation.

In collaboration with affected stakeholders, TSM will strive to support maximizing the number of scrap tires processed in Manitoba by helping to create new sustainable markets for recycled rubber products, support additional processing capacity, promote recycled products and help to spur economic development in this important area.

Goal of the Consultation Process

Over the summer months Tire Stewardship Manitoba (TSM) will be conducting stakeholder consultations, either in groups or one-on-one sessions with municipalities, affected industries, the environmental community and the public to answer any questions they may have prior to commenting on the tire plan.

Scrap Tire Collection and Processing

Manitoba is fortunate to have several scrap tire processors. In general terms, processing consists of size reduction, either shredding the tires into 2"-5" nominal pieces that can be used in various civil engineering applications, or, they can continue the size reduction, extracting the non-rubber components and produce a fine rubber powder, known as "crumb rubber" for sale to manufacturers of rubber-based products. These typically include molded products, sport surfaces and other rubber goods.

Increasing scrap tire diversion capacity in Manitoba will require funding. In all stewardship models in Canada, this is achieved through subsidizing a portion of the diversion effort. When waste has an intrinsic high value (like metals) subsidies may not be required. However, in the case of scrap tires, which have a negative value, subsidizing some diversion is necessary.

Financing diversion creates an incentive to collect tires and transport them to viable diversion industries, versus dumping or landfilling. In addition, providing processors with additional revenue will encourage the expansion of capacity through research and development of new end-market applications.

Diverting tires from landfill can be achieved through several different methods. Each method carries its own cost structure and environmental profile. The program plan will address what kinds of diversion will be promoted through financial incentives, as well as determine what incentives are considered fair, thereby promoting high-end over low-end uses.

Major Scrap Tire Markets

Civil Engineering

- Large tire shreds have been successfully used as light-weight fill material in roadbed and embankment stabilization projects and whole large tires as breakwaters and erosion barriers.
- Shredded and crumbed tires are also being used for a range of purposes in engineered landfill.

Playground and Sport Surfacing

- Medium-sized rubber crumb (5-10 mm) has become popular as a material for playgrounds to provide protection to children from falls and injuries. This same material size-range is being used in equestrian training arenas (usually mixed with sand) to provide a secure and safer footing for horses. It is also being used in golf courses and sports fields to protect turf and provide better drainage.
- Pour-in-place surfaces for playgrounds and running tracks have been made using fine rubber crumb and a binding agent.

Molded Goods

- A full range of consumer products is being manufactured from recycled rubber from tires. The main applications are where the rubber crumb is mixed with a binding agent and moulded into products. This includes rubber mats, paving stones and blocks, curb stops, railroad crossings, automotive parts, solid wheels, fatigue mats, truck-box liners, etc.
- Fine rubber crumb is a feedstock to a range of manufacturing processes.
- Loose rubber crumb is also being made into animal mattresses for dairy cattle.
- Ultra fine rubber crumb can be made into sealants, soaker hoses, carpet underlay, and partially re-vulcanized rubber reclaim.

Fabricated Goods

- Cut tires are used to make mats, animal feeders, fencing, composters, planters, blasting mats, etc. This use also includes rubber parts punched from cut tires.

Rubberized Asphalt

- Recycled rubber crumb has been used in asphalt in two different ways; first as a filler or aggregate replacement, and secondly as a binding agent. Rubberized asphalt has shown enhanced wear and traction performance, as well as minimizing the wear-related road rutting and frost deformation of roads in cold climates.

Energy Recovery

- Both whole and shredded tires are used extensively in other parts of the world in energy recovery, as well as in some provinces in Canada. Controlled combustion of tires can be used to recover the energy in the hydrocarbons.

For More Information...

Tire Stewardship Manitoba

<http://www.rubberassociation.ca/TSM>

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Tire Stewardship Regulation:

<http://www.gov.mb.ca/conservation/pollutionprevention/waste/tires.html>