



Northwest Product Stewardship Council

2008 Tire Subcommittee Issue Paper **January 28, 2008**

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The Issue

An environment free of waste tires is important to the public health of all Washington citizens. There are many issues regarding tires, including the reuse of tires and recycling of the resources within unwanted tires, handling problems at solid waste transfer stations and other facilities, “floating” of whole tires in landfills, limited options for what to do with old tires in the garage or behind the barn, and tire pile and tire fire worries.

Unused tires that are stored outdoors harbor mosquitoes, rodents and other vermin and in Eastern Washington, can harbor rattlesnakes. West Nile Virus, transmitted by mosquitoes, threatens the health of citizens and animals. Historically, the state has witnessed catastrophic tire pile fires, such as the Everett Tire Fire of 1984, and millions of dollars have been spent cleaning up tire fire sites and tire piles. There remain many tire piles that have existed for a significant length of time and present a current fire hazard. Tires continue to challenge communities, as well as state and local officials who are responsible for cleaning up unauthorized dumpsites and preventing further accumulation of unwanted tires.

Approximately five million scrap tires are generated annually in Washington State. Oregon’s last estimate of waste tire generation occurred in 1989 with two million waste tires and nearly half these tires discarded and unclaimed. The number of scrap tires continues to rise each year as the number of vehicles on the road and miles driven increases. It takes around 22 gallons of crude oil, along with steel and natural rubber, to make a new tire. When tires are landfilled or stockpiled, the value of these resources is lost. Significant market development activities have not been conducted within Washington State. Washington is one of the few states with no restrictions on landfilling tires, and consequently, many scrap tires end up there.

In 2006, an estimated 5 million waste tires (85,000 tons) were generated in Washington. Forty percent of these waste tires were landfilled, 28 percent recycled, and 26 percent diverted to other uses with unknown end use or disposition of the remaining 6 percent. Landfilled waste tires represent about 0.2 percent of the total solid waste stream in Washington. Trends in tire recycling, reuse, and landfilling from 2002 to 2006 are based on tire business and recycling center data reports. This data does not include cleanup totals. Landfilling of waste tires shows steady increases from 2004 to 2006. Tire recycling shows increases from 2002 to 2005 followed by a 50 percent reduction in 2006. Tire retreading reported by businesses fluctuates from 2002 to 2006; some of this is due to reporting errors.

In 2002, SHB 2308 required Ecology to produce a report that includes “The feasibility of establishing and maintaining an incentive program for market development of scrap tires. This shall include, but not be limited to, the results of research into the availability of funding for such a program and proposed criteria for the program that favors projects utilizing higher end uses of scrap tires.” The report is a rich source of background information and outlines the characteristics of a successful program and briefly addresses product stewardship models (WDOE).

Recently, Washington State has made great progress in cleaning up existing waste tire piles, but the work is not complete. The “emergency” focus on waste tire clean up has been appropriate and welcome. However, there is a need for the ongoing management and prevention of waste tire piles through product stewardship policies – whereby the manufacturers, distributors and/or retailers of tires work together (or take responsibility as individual businesses) to provide for the collection, transport, recycling, disposal, market development and clean-up of discarded tires and tire waste. Product stewardship ensures that every tire has a “home” and is properly reused, recycled or disposed – preferably in a cradle-to-cradle system. Some companies, such as Les Schwab, have taken a higher degree of responsibility for their customers tire waste, but comprehensive, universally available tire stewardship programs are not available in communities throughout the NWPSC region.

Waste Tires in Washington

Significant tire fires in Everett and Pierce County stimulated legislative action in 1984. In 1989, the Legislature established the Vehicle Tire Recycling Account (VTRA) that collected a one-dollar-per-tire fee on the retail sale of new vehicle tires. The tire fee ended in 1994, and funds lasted through 1998 and were used to clean up 8 million tires in 27 piles.

Washington’s current Waste Tire Pile Cleanup is funded by a \$1 fee on the sale of new replacement tires [passed in 2005, sunsets in 2010]. The Washington State Department of Ecology contractors started waste tire pile cleanups in May of 2007. Sites eligible for tire pile clean-up must have more than 800 waste tires, and tire pile removal is a one-time cleanup offer to property owners. After cleanup, site owners must properly manage waste tires.

As of January 2008, there are 100 waste tire piles in the state containing an estimated four million waste tires, expected to cost nearly \$9 million to remove, process and dispose. That’s an average cleanup cost of \$2.25 per tire. Most of these tires are unable to be recycled for a variety of reasons including contamination with soil/debris, problems with flooding existing markets with material, and lack of adequate and expanding markets. As a result, tires in these piles are mostly destined to shredding for landfill disposal.

Recently, some funds in the tire cleanup account have been transferred to the Washington State Department of Transportation for road maintenance. The tire account is not protected such that all funds in the account can only be used for unwanted tire management. Currently, Ecology estimates that sufficient funds remain for Ecology to complete cleanup of existing waste tire piles.

Tire pile cleanup progress through December 2007 includes the Goldendale tire pile that contained about two million tires (20,240 tons). Cleanup of this pile cost \$3.2 million, which is about \$1.58 per tire. Contractors completed the cleanup in November of 2007 with 92 percent of the tires shredded and landfilled. Another 21 tire pile site cleanups were completed in 2007, removing about 780,000 tires (7,800 tons). These slower paced cleanups cost \$1.4 million, which is about \$1.79 per tire. Over 40 percent of these tires were recycled or reused. Cleanup in 2008 will continue at 75 more sites containing 1.3 million tires (13,000 tons) at a cost of \$4 million, which is about \$3 per tire. This “one-time” cleanup program will continue in 2008 and likely end in 2009.

How are waste tire piles created?

Waste tire piles are created in several ways. In many cases, the original site owner or operator who created the tire pile no longer owns the site or operates the business. At times, the property has passed to the next generation. Examples of waste tire piles include:

- Sites where the owner was paid for each tire delivered to the site, providing a “disposal” option for a difficult to manage waste material, resulting in large legacy piles.

- Auto wrecking yards that removed tires from vehicles and stored them on the site, eliminating the cost of off site disposal, resulting in large legacy piles.
- Sites where owners collected tires with plans to start a creative new business using waste tires or use the tires for another purpose (like fencing); however, plans failed resulting in a tire pile.
- Businesses with a supply storage area that has room for waste tires, eliminating the cost of disposal, resulting in large piles.

What can customers do with old tires?

The best thing for customers to do is to leave the old tires at the dealership when new tires are purchased as disposal cost is often included in the new tire cost. Proper disposal of waste passenger tires can cost from \$1 to \$5 per tire. Disposal costs increase for the larger truck, semi-truck, and farm equipment tires. However, if a citizen has old tires and are not buying new ones, their options are more limited, and often involve a fee. These options include:

- Dispose or recycle at a landfill or transfer station, which usually restricts the number per person
- Return a limited number to a tire dealer, if they accept waste tires from the public
- Have a licensed tire hauler pick them up
- Drop them off at a tire recycling/processing facility

Uses for recycled tires

Tire recycling and reuse end markets in Washington and Oregon include ground rubber, punched tire tread materials, tire bales, retreading, and fuel use. The ground rubber product market has shown the greatest growth in recycled tire materials. Conversion to synthetic field turfs using crumb rubber for football, soccer, and other playing surfaces will be limited by the finite number of athletic fields. The cut, punched, and stamped rubber products market is limited to tires that do not have steel belts, known as “bias-ply” tires. This market is limited by the supply of bias-ply tires. Tire bale use is limited by the construction market demand. Retreading commonly occurs for semi-truck, aircraft, bus fleet, and farm tractor tires, and steel belted tires are not normally retreaded. Cement kilns use tires as fuel, replacing natural gas or other fuel sources.

The NWPSC Position

Washington State needs a long-term business-managed system for addressing newly discarded tires. This approach is called product stewardship, whereby the manufacturers, distributors and/or retailers of tires work together (or take responsibility as individual businesses) to provide for the collection, transport, recycling, disposal, market development and clean-up of discarded tires and tire waste. British Columbia has a model program, provided by those in the tire industry, and in Washington, Les Schwab practices product stewardship on an individual company basis.

Waste tire management has been a long-time problem in Washington, and the State has failed numerous times to comprehensively resolve the issue. Multiple studies and stakeholder processes have addressed the issue but the findings have only partially been enacted. While progress is being made to clean up legacy waste tire piles, little has been done to support collection, transport and recycling of tires, prevent future piles and develop markets for products made from tire waste. Businesses engaged in the manufacture and sale of new tires are more capable of addressing end-of-life management of discarded tires than the state government.

Thirty-five states have tire fee programs and all but one Canadian province has fee or stewardship programs. The characteristics of the most successful of these should be incorporated into a meaningful, comprehensive and sustainable program for Washington State using a product stewardship model. Current and past efforts have not resulted in such a program and the state must adopt different approaches if it wants different results.

Product Stewardship Models – British Columbia

The nearest example of an excellent product stewardship program is British Columbia. The Financial Incentives for Recycling Scrap Tires (FIRST) program began in 1991. In 2006, the British Columbia's Environmental Management Act - Recycling Regulation was amended to include a tire product category. The regulation makes the tire producers (manufacturer, distributor, importer, retailer) responsible for the life-cycle management of their products, including financing the collection and recycling of discarded products. The program has now transitioned to an industry stewardship program administered by the Tire Stewardship B.C. Association, a not for profit organization formed by the major tire producers/retailers of British Columbia. To learn more, visit: <http://www.env.gov.bc.ca/epd/epdpa/ips/tires/> and <http://www.tirestewardshipbc.ca/>

The cyclical clean up of tire piles by the Department of Ecology and the accumulation restriction of 800 tires are not effective ways to manage tires in Washington State. Prevention measures and a statewide comprehensive collection system are not in place. With the sunset of the \$1 tire fee in 2010, the Ecology-run clean up program will no longer be funded to clean up piles, let alone engage in prevention strategies such as kick-starting a statewide tire stewardship program. The NWPSC advocates for a producer responsibility system that places the responsibility on the tire producer to finance and implement an effective system for managing tires at the end of life.

Proposed Solution/Recommendations

Form a stakeholder group to define the scope of waste tire issues in Washington, including enforcement and prevention strategies. Include discussion of producer responsibility policies for future used tire collection and management strategies and pile prevention.

Subcommittee Next Steps/Timeline

Completed education efforts include a mailing to tire-related businesses informing them of proper waste tire management. Businesses will be asked to ensure they were using licensed waste tire carriers or licensed waste tire storage businesses.

In 2008, there will be education outreach efforts at Washington trade association meetings and conferences. Enforcement of waste tire pile storage occurs at the local level with the jurisdictional health district. Publicizing tire storage and hauling enforcement efforts should help with prevention. Several amnesty cleanup pilot projects are scheduled in 2008 as well.

NWPSC has drafted framework principles and sample legislation for mandating producer funded and implemented systems. The principles and sample legislation will be adapted in 2008 to address waste tires and will require establishing a product stewardship system for the collection of tires across the state.

References

Washington State Department of Ecology (WDOE). (2002). Washington 2002 SHB 2308 Scrap Tire Report, December 2002. Retrieved on February 8, 2008 from <http://www.ecy.wa.gov/biblio/0207029.html>