

# CARPET RECYCLING SUCCESSIONS STACK UP

## THE GROWING SECTOR OF CARPET RECYCLING GETS AN IN-DEPTH LOOK FROM THREE EXPERTS IN THE FIELD.

BY SHIRLI AXELROD, KRIS BEATTY AND JAMES PALMER

**W**hat a difference 18 months can make. In August 2010, we wrote an article for *Resource Recycling* about efforts to expand the carpet recycling industry in the Northwest (*Rolling out the Green Carpet*). Today, the region has made great strides on a number of fronts, with growth in businesses and jobs, improved local carpet recycling volume, increased collaboration leading to best practices guidelines, a new public purchasing contract and momentum on a stewardship bill in the Washington Legislature.

### Growing carpet recycling industry

Since 2010, the number of carpet recyclers in Washington State and Oregon has grown dramatically, from one to three processors (see Figure 1) and over a dozen collection or drop-off facilities for commercial and residential customers. This has dramatically increased the local capacity for carpet recycling. Additionally, recyclers operating in California and in the Southeast U.S. collect carpet from the Pacific Northwest.

Nationally, about 4.5 percent of carpet was recycled in 2010, compared to 2.3 percent in Washington and 2.4 percent in Oregon. In 2011, Full Circle Environmental, Inc. conducted a study for Seattle Public Utilities, indicating that as much as 5 percent (8,000 tons) of the carpet discarded in a year may be recycled in 2012. In Washington, almost 4,000 tons were recycled in 2010 (See Figure 2). This increase in carpet recycling rate can be attributed to proactive attention on the part of government and private industry to solve problems collaboratively.

To facilitate development of the local supply chain for recycled carpet, King County and Seattle Public Utilities hosted key recyclers in western Washington, as well as businesses currently, or planning

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to, process carpet in the Pacific Northwest at a networking event in February 2011. Participants were able to explore collaborations among processors, haulers and dealers and learn about available permit coordination assistance in addition to favorable state and local tax provisions for purchasing equipment and training staff. Efforts continue to develop the supply chain, including end-markets for carpet-derived commodities.

## Best practices for carpet removal

Asbestos contamination and other factors that diminish recyclability have been barriers to widespread carpet recycling in the Pacific Northwest. In addition to asbestos, other contaminants that can render carpet unrecyclable are water, paint splatter and construction or demolition dust and debris.

Carpet products themselves do not contain asbestos, but can be contaminated with asbestos from other materials such as sheet vinyl and mastics containing asbestos. One recycling facility that led the region in sorting carpet for recycling worked hard to avoid asbestos exposures and the need for abatement that can be caused by receiving asbestos-contaminated loads of carpet. Concerns about asbestos contamination in carpet, however, persist.

To increase carpet recycling potential by reducing asbestos and other contaminants, King County convened a workgroup to develop the *2011 Carpet Removal Best Practices for Carpet Recycling* – a tool for flooring professionals. The workgroup consisted of representatives from local flooring companies, Local 1238 of the International Union of Painters and Allied Trades, Washington State Flooring Covering Association (WSFCA), recyclers that sort and process carpet, air quality and worker safety regulatory agencies, as well as other interested parties.

The best practices provides detailed information to successfully remove carpet for recycling. It is also the first known document to clearly lay out the air quality and worker safety regulatory requirements especially relating to reducing asbestos exposure potential during carpet removal, which protect workers, building owners/occupants, and the environment.

Based partly on the findings and recommendations of the best practices document, the WSFCA facilitated regulatory compliance by sponsoring three, two-hour asbestos training seminars for their members

## Figure 1 | Carpet recycling processors in the Pacific Northwest



Source: King County LinkUp Program, Seattle Public Utilities

in the flooring industry in late 2011.

## Nationwide contract for public agencies, schools and nonprofit organizations

Developing markets for recycling and recycled-content products has long been part of public agency strategy, and a new collaborative purchasing contract makes it easier to recycle carpet, as well as promote green practices for flooring jobs in general. U.S. Communities, a public purchasing cooperative, and City of Seattle's Purchasing Office conducted a competitive process, establishing a first-time contract for use by hundreds of agencies and organizations.

The contract requires recycling removed carpet and other materials to the greatest extent practical in each part of the country. The flooring products offered by the vendor, Empire Today, are intended to meet sustainability standards including NSF/ANSI-140-Gold for carpet. Many products by numerous manufacturers are certified to this standard, which is also a requirement for federal agencies.

While the City of Seattle, King County and the State of Washington have included

recycling requirements in their contracts for a number of years, the U.S. Communities contract significantly expands the potential market demand.

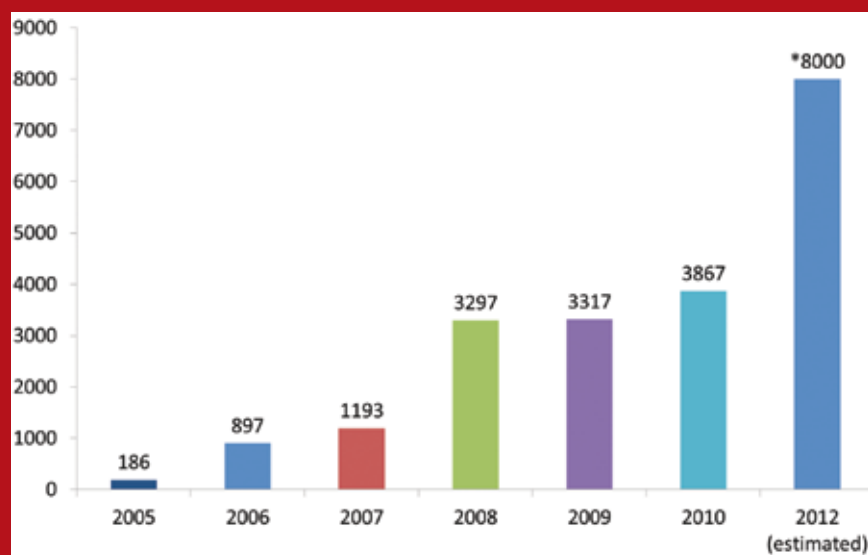
Empire Today has committed to minimizing the environmental impact of customers' day-to-day operations and supports their LEED green building certification efforts by participating in the Carpet America Recovery Effort (CARE), an industry effort to increase recycling of carpet, through Empire's carpet and padding recycling program.

Through a partnership with Carpet Landfill Elimination and Recycling, a national carpet and pad recycler, 100 percent of the carpet and padding removed by Empire's residential, small business and commercial installers that can be recycled will be recycled. Empire reports that it piloted the new program in the first quarter of 2011 and since then, over 8 million pounds of carpet and padding have been recycled.

## Legislating carpet recycling

With the passing of Assembly Bill 2398 in 2010, California became the first state in the country to establish a statewide, private-sector designed and managed carpet product stewardship program. Since enactment of the

## Figure 2 | Washington carpet and pad diverted or recycled (in tons)



Source: WA State Dept. of Ecology, Full Circle Environmental Independent Study

## Real-world experience

A range of local companies have found that recycling old carpet makes business sense. Property management companies, such as Legacy Group, find that clients are environmentally-savvy and want carpet to be diverted from disposal. According to Legacy Group Vice President John Finch, "It seems like everyone is asking 'What are you doing with the carpet? Where is it going?'" In Legacy's case, they offered carpet recycling to a large, Redmond-based software developer, as a value-add to their contract six years ago. Recycling carpet from all their jobs has been the practice ever since. If the new carpet is from manufacturer InterfaceFLOR, Interface recycles the removed carpet for free. Otherwise, Legacy sends the carpet to a local carpet recycler.

bill, California's Department of Resources Recycling and Recovery (CalRecycle) reports the creation of more than 50 new jobs in the state and the number of carpet recycling facilities has increased from four to 18. CalRecycle has also conditionally accepted the California Carpet Stewardship Plan submitted to the agency by CARE, which is the designated stewardship organization for the program.

In Washington, State Senator Jeanne Kohl-Welles has introduced Senate Bill 6341, a bill to create jobs by increasing recycling of discarded carpet. "One thing that I want to do for sure is to do everything we can to reduce carpet in the landfills," said Senator Kohl-Welles, who noted that the amount of discarded carpet being landfilled is "staggering." King County and Seattle Public Utilities are helping keep carpet recycling stakeholders informed about SB 6341, including through the King County LinkUp Program blog.

SB 6341 requires that producers of carpet sold in Washington participate in a carpet stewardship organization, which would implement a carpet recycling program on their behalf. The program, funded by the carpet producers, would pay for program operation costs and expenses as well as education and outreach efforts and administrative activities.

Passage of SB 6341 is expected to encourage the growth of Washington's carpet recycling infrastructure and proposes

to provide a convenient statewide carpet recycling program at no cost to residents and businesses, such as carpet sellers and installation contractors.

The intent of SB 6341 is threefold: Create jobs in Washington, increase the amount of discarded carpet that is recycled throughout the state and establish a reliable supply of recycled raw materials from recovered carpet that can be used to manufacture new products.

## Economic opportunity

Discarded carpet and padding makes up nearly 3.6 percent (335 million pounds) of Washington State's total municipal waste by weight. While carpet recycling rates have recently increased in the state, there is still a long way to go. Carpet, made from valuable, non-renewable petroleum-based resources, is a job creator when recycled, but is wasted when landfilled or incinerated.

Recycling materials creates six times as many jobs as landfilling and many of these jobs high-paying skilled positions. Independent research by Seattle Public Utilities found that by the end of 2011, 63 jobs in Washington, as well as 48 in Oregon, were directly attributable to the burgeoning carpet recycling industry.

Recent activity and growth in the carpet recycling industry suggests that the number of jobs attributed to carpet recycling in the Pacific Northwest will only

grow. An increasing number of local carpet dealers and installers have begun offering recycling services for their customers. The increased consumer awareness of recycling options, burgeoning customer demand, and growing local processing capacity all point to more business around carpet recycling in the region.

## The future

The Pacific Northwest is beginning to see tangible and substantial results from various efforts to spur carpet recycling. The region is on the path to eventually divert the estimated 37,000 tons of used carpet currently going to local landfills while creating jobs and measurable economic activity. Despite the successes so far, much more must still be done.

The collaboration between the King County Solid Waste Division, Seattle Public Utilities, the Washington State Department of Commerce and private-sector businesses has been key to this effort's success. Beginning in 2009, these agencies, other state and local governments and research universities developed the *Northwest Carpet Recycling Strategy* to support the establishment of a local recycling market for used carpet generated in the Pacific Northwest. This strategy created a roadmap for developing processing capacity for used carpet and end-markets for carpet-derived materials. Many of the efforts described in this article are part of the implementation of the strategy, which continues in 2012.

Carpet is one of several materials the

City of Seattle is working to move out of the landfill and into productive reuse and recycling. As recycling options grow for materials like carpet, the City's solid waste agency proposes landfill bans as a means of "leveling the playing field," increasing certainty about materials for recyclers and manufacturers who use recovered materials, and maximizing recycling tonnages. The City Council will consider a measure to certify receiving facilities and phase in bans on materials including carpet starting in 2013.

Public and private sector organizations will continue to develop local processing capacity and end markets while shaping public and commercial opinion and actions about choosing recycling as the preferred end-of-life choice for carpet. Our region, the economy and the environment will be the better because of it. RR

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For a list of links, resources and additional information, please visit the LinkUp website at: [www.kingcounty.gov/linkup](http://www.kingcounty.gov/linkup).

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Shirli Axelrod is a senior environmental analyst for Seattle Public Utilities. She can be reached at [shirli.axelrod@seattle.gov](mailto:shirli.axelrod@seattle.gov). Kris Beatty manages King County Solid Waste Division's LinkUp Program. She can be contacted at [kris.beatty@kingcounty.gov](mailto:kris.beatty@kingcounty.gov). James Palmer is an economic development manager for the Washington State Department of Commerce. He can be contacted at [james.palmer@commerce.wa.gov](mailto:james.palmer@commerce.wa.gov).

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