

What's Happening with Carpet Recycling webinar – Nov. 4, 2013

Questions and Answers

Q. How is the calcium carbonate extracted in the process?

A. Terry Gillis, Recovery 1:

- We grind it out. There may be other ways of doing that, like shredding it out. But basically, you want to get it to the point that you can separate it from the polypropylene backing.

Q. How can carpet recycling be mandated if processes are not in place to recycle the material?

A. Shirli Axelrod, Seattle Public Utilities:

- Mandated recycling doesn't work if there are no processes for it.
- The City of Seattle is keeping tabs on markets and capacity for materials.
- Bans can help markets by giving processors and end users more certainty about the supply of recyclables and recovered materials available.
- Seattle's landfill ban was to become effective in 2014, but has been delayed to 2015.

Q. Kathy, on the focus to spend collected funds, describe any anxieties about spending too quickly or spending less intelligently.

A. Kathy Frevert, CalRecycle:

- You do not want to spend money for the sake of spending. In our May 2013 stewardship plan, the program was on course to have \$8 million in unspent funds by 2016. Whereas the funds distributed were to be about \$3 million, so it was a reserve that has been building up.
- At the same time there were program elements that were not working well, so CARE is trying to figure out what it needs to spend collected funds on to implement the program. CARE does a lot of internal analysis. They have a committee that is deeply involved in coming up with different scenarios and analyzing "if we pay this, what might result?"
- Another concern is drawing out funds too quickly. Bit of a balancing act.

Q. Can you comment on the effect of low-cost landfilling on the program? We are lobbying for a general increase in landfilling similar to what has been established in many European countries to make the alternatives to landfilling more competitive and viable. For example resource cost/resource depletion cost.

A. Kathy Frevert, CalRecycle:

- We found, in the rural pilot, that a county with a very high disposal tipping fee provided an incentive to pay less to recycle carpet. That county received a very good response. In California the landfill tipping fees fluctuate quite a bit from county to county.

Q. Is there going to be a legislative action in Olympia again this year?

A. Kris Beatty, King County Solid Waste Division:

- We have not heard about legislation in Olympia in 2014. I think we would have heard something by now, but we do not know.

Q. Please explain the comment about retailers to only sell “products” in an approved plan.

A. Kathy Frevert, CalRecycle:

- Retailers are only supposed to sell carpet in California from carpet manufacturers participating under CARE's stewardship program. There is a list of roughly 80 manufacturers, and they pay into the CARE program.
- Creates a level playing field because all of those manufacturers are paying into and benefiting from the program.

Q. Question about the fuel pellets that were mentioned as an end market. I am wondering if these were Kela.

A. Kris Beatty, King County Solid Waste Division:

- This is not Kela, but a new company with a product they just developed. The company is called Urban Energy, and they are located in the Pacific NW. We don't know of any relationship between Kela and Urban Energy.

Q. What do carpet sellers think of taking carpet from non-customers? For example, people discarding carpet and putting in hardwood instead. Would those people be able to send their carpets to carpet sellers somehow?

A. Shirli Axelrod, Seattle Public Utilities:

- Carpet recycling doesn't have to be limited to carpet replacement projects. It could include carpets from any kind of flooring replacement or demolition projects.
- Key thing that will determine whether carpet can be recycled is the value of the material in it. So if it is not contaminated in a way that does not make it recyclable and, for instance, contains nylons. There is a market for nylons that are not so good for other types of fiber.

Q. Is there a rough time estimate for being able to recycle other types of carpet other than just nylon? Is there anyone around the country currently able to recycle the non-nylon material?

A. Terry Gillis, Recovery 1:

- There have been markets for non-nylon polypropylene; for example, septic tanks. There are some opportunities in the non-wovens industry, which uses plain fiber. I think LA Fibers uses it in their carpet pad. Here locally, hopefully the process we are developing at Carpet Processing & Recycling (CP&R) will be able to handle non-nylon materials profitably. I believe Again is also trying to process non-nylon materials profitably. At the end of the day you have to make a buck or it is just not worth the time. That is the key.

Bob Peoples, CARE:

- CARE has hired an engineer to work on the non-nylon and has focused a lot of the PET (polyethylene terephthalate) fiber challenge nationally. He has been working at this now for about three and a half months. We have a matrix of about 30 potential technologies and market opportunities that we are working very hard on to find major outlets for this material. There have been a few announcements made for some

very large volume outlets, but they will not be online till 2015. CARE board just approved a full scale trial in Europe that will take place in January to produce materials made from PET specifically designed to get the properties where they can be useful in a manufacturing process.

- The economics of non-nylon is you have to make a buck. PET in particular is extremely challenging and people need to understand that before they make decisions on investments and such. The availability is high, but the cost is low on the global market compared to high value nylons.

Q. Is the demand for nylon 6-6 being met both locally and nationally?

A. Bob Peoples, CARE:

- There are still some folks out there that can use the material if they could get it. There are some challenges in certain areas of the country, where getting more nylon would be extremely important. In the Northeast it is a factor right now that there are folks in California that could process more material if they could get their hands on it.

Q. Will the California bill be retroactive? If you have been shipping carpet in California since 2011, will they go back and check shipping records and charge the \$.05 retroactively?

A. Kathy Frevert, CalRecycle:

- It goes from when the program started, so it is just carpet being sold in California. There was some inventory at the time, so that could be sold after July 2011.

Q. Can there be a push to only manufacture recyclable carpets?

A. Shirli Axelrod, Seattle Public Utilities:

- There can be a push. A lot of different parties can be a part of that. Looking back at other recyclables that now perhaps look relatively easy to recycle, some of us will remember several different bottles with different resins or sleeves and labels that were a challenge and the push to make them more out of a single material that makes them easier to process. That thinking can be found at least to some degree with carpet as well. It is a good place for voices like these to try and make that point that it really is the whole lifecycle of this product that somewhere along the way consumers are paying the price of.
- Making them more recyclable from the beginning is a pretty important consideration. Whether it is institutional purchasing or individual, paying attention to recyclability is a big part: not just what goes into a product we buy, but what happens to it later on.

Q. We are out in a rural county that adds up to less than 5% of all total landfill in Washington State. We ran into the issue of transfer station tipping fees and how they play a role in local governments' revenue. Our county has the second highest tipping fees in the state. Yet, it is not a financial inducement to divert or otherwise not get that revenue. Do you see any other strategies to pursue when the tipping fee is such a high barrier for local governments changing ordinances with respect to diversion in recycling?

A. Shirli Axelrod, Seattle Public Utilities:

- Tipping fees is that they vary a lot across the state of Washington and then across the country. Some places are not paying tipping fees - it is a part of property tax or some other way. So how people pay for disposal and how they pay for recycling becomes a place where there's room to send better signals. In Seattle and

King County, where tipping fees for garbage are second highest in the state, the tipping fees for recycling are considerably lower.

- The more separated the materials are when they go to the recycling facilities, the lower that tipping fee. So for example, \$140 per ton to get rid of carpet as garbage in the City of Seattle goes down to below \$100 per ton if you are recycling carpet. That is a big part of the economic message.

Q. What is the role of public procurement and what role is it going to play in creating outlets in demand?

A. Shirli Axelrod, Seattle Public Utilities:

- Public agencies and institutional purchasing want to walk our talk and use our purchasing power to have an impact on the markets. We have in Washington had provisions in the state contracts for both purchasing recycled content carpet and recycling carpet that comes out of state institutions since about 2002. We have provisions like that in the nationwide contract, the US Communities Contract, and standards like the NSF 140 standard for carpet that looks across the lifecycle that really help to tell that story in the marketplace and to make it easier for purchasers.
- While public procurement is always a player, large institutional purchasing is also a significant player. So, a company that own offices of buildings and regularly buys and replaces flooring for instance, has an influence. It's not just what kind of flooring we would buy, but all sorts of other products that are made with recovered material that can be used in public and private projects and helping to provide demonstration opportunities and so on.
- Working with economic development folks to help local businesses that may be developing products, using the academic institutions to help characterize the materials better for potential manufactures make a well-rounded effort. No recycling program exists if there are not markets for recovered materials. If it's not being processed, it becomes long term storage otherwise.

The following questions were not addressed during the webinar due to limited time, but have been answered below:

Q. Why is it so expensive to recycle carpet here in Washington compared to nationally? Those 53 foot trailers cost about \$300 - \$400 for pickup and our historical price in Washington State has been over \$1,200 - \$1,600. Any ideas about that?

A. Shirli Axelrod, Seattle Public Utilities and Bob Peoples, CARE:

- This is a complex question. There are many variables to consider: local tipping fees, labor rates, transportation costs, nature of operation (collection and sorting vs. processing and then type of processing), population density, facility costs and square footage, electricity, etc. Another big factor is what technology a processor may choose to operate: simply shredding, grinding, hammer mills, shearing, other. If shearing, how will you handle carcasses (the material left after the face fiber is sheared off) – a big problem for some processors today. Other factors, lease vs. buy equipment; taxes, local incentives, and diversification of services.
- Most successful carpet recyclers have other lines of business. This is a good topic for us to research further, though, so we will look into it further and hope to provide additional answers.

Q. What incentives can be offered generally to incentivize purchase of products containing post-consumer-carpet?

Example: hybrid vehicle tax credits?

A. Shirli Axelrod, Seattle Public Utilities:

- We've compiled business resources available in Washington, and contacts with Washington Department of Commerce and local economic development staff. These can offer certain services and credits, such as relating to equipment for manufacturing, job-training, economic development "zones" in the state. There are also many public utility rebates and technical assistance for energy and water-efficient equipment.
- We encourage any interested business – whether you're already in WA or not – to contact us to follow up about this.

Q. If the cost-per-ton landfilled would go up to \$80 per ton, wouldn't that make recycling programs such as carpet recycling much more viable? As long as landfilling is as inexpensive as it currently is, isn't recycling more utopian than realistic?

A. Kris Beatty, King County LinkUp:

- Yes, successful recycling of any product/material is aided by recycling fees being competitive with the landfill disposal fees. Landfill disposal fees vary across the state of Washington—some lower and some higher than the fees that the carpet processors in Washington are currently charging. The economics need to make sense in order for recycling to work and be sustained.

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