

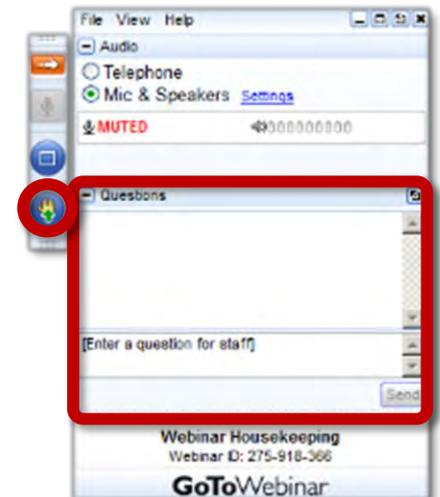
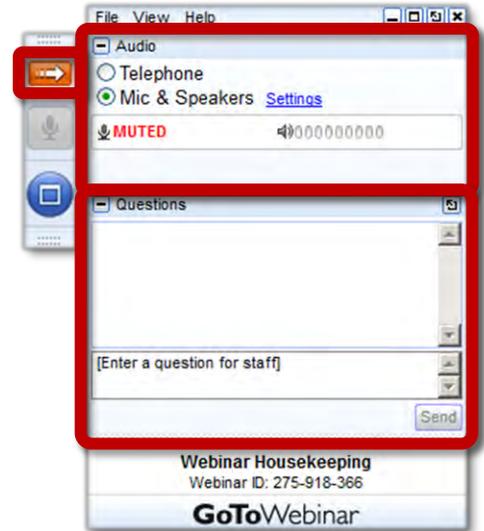
What's Happening with Carpet Recycling



About this webinar

- All attendees are currently on mute.
- Question? Please type it in the control panel.
 - We'll answer the questions at the end of the session. If we don't have time for all questions, we'll follow-up via email.
 - There will also be an audience participation segment. If you'd like to participate vocally, raise your virtual hand.
- We will be recording the webinar and posting it later on the web.
- We will follow up with a short survey. Your participation would be most appreciated!
- Any technical questions about the webinar, please call or text Wyatt at 206-251-9720.

Thank you!



Agenda

- Introduction – Shirli Axelrod, Seattle Public Utilities
- Updates from Outside the Northwest – Kathy Frevert, CalRecycle and Shirli Axelrod
- Northwest Updates – Terry Gillis, Flooring Association Northwest (FAN); Kris Beatty, King County LinkUp; Suellen Mele of Zero Waste Washington; and Shirli Axelrod
- Q and A – via “Questions”
- Next Steps – Kris Beatty



Why we are doing this webinar

- Local solid waste agencies interested by the volume of carpet in waste, and opportunity to grow local recycling while meeting our mandates to reduce garbage.
- A few years ago, opportunity seemed particularly good; especially in the NW where green building and recycling mandates are strong.



- Carpet recycling has increased in Washington, as you'll hear about; there's continuous room for growth
- We value sharing information, networking, and collaborating with all who are affected and interested.

What's In Carpet to Recycle?

Carpet consists mainly of

- Face fiber, mostly Nylon; next most common is Polyester (PET)
- Filler, mainly Calcium Carbonate with Latex
- Backings (other plastic resins)
- Made to stay together, not come apart with wear...
- Recycling needs good separation and “purity” of materials
- Recovered material mostly goes back into new carpet or into molded plastic parts for the automotive industry.



Examples of Products Made From Carpet Materials



Carpet and Carpet Cushion



Automotive Parts



Boards, Piers, Signs, Decking



Filters, Booms, Absorbents



Reinforced Concrete and Asphalt



Floor Blocks, Wall Tiles

What's Happening in Carpet Recycling

Updates from Outside the NW

- California Carpet Stewardship Program
- Other Updates Across the Continent

California Carpet Stewardship Program

Nov 4, 2013

www.calrecycle.ca.gov/carpet

Kathy Frevert

Kathy.Frevert@calrecycle.ca.gov

916-341-6476

www.calrecycle.ca.gov/EPR/Carpet

What this presentation covers

- Program basics
- Results
- Challenges

Carpet Recycling (AB 2398)

Signed into law in 2010: three key documents govern program:

- **Statute** addresses goals, financing, enforcement
- **Regulations** add clarity to Statute
- **Plan**
 - Developed by CARE, the stewardship organization
 - CARE designs and implements program described in plan
 - Submitted plan to CalRecycle, conditionally approved Jan 2012.
 - Updated Plan submitted late Oct 2013 – under review

Documents at: www.calrecycle.ca.gov/carpet

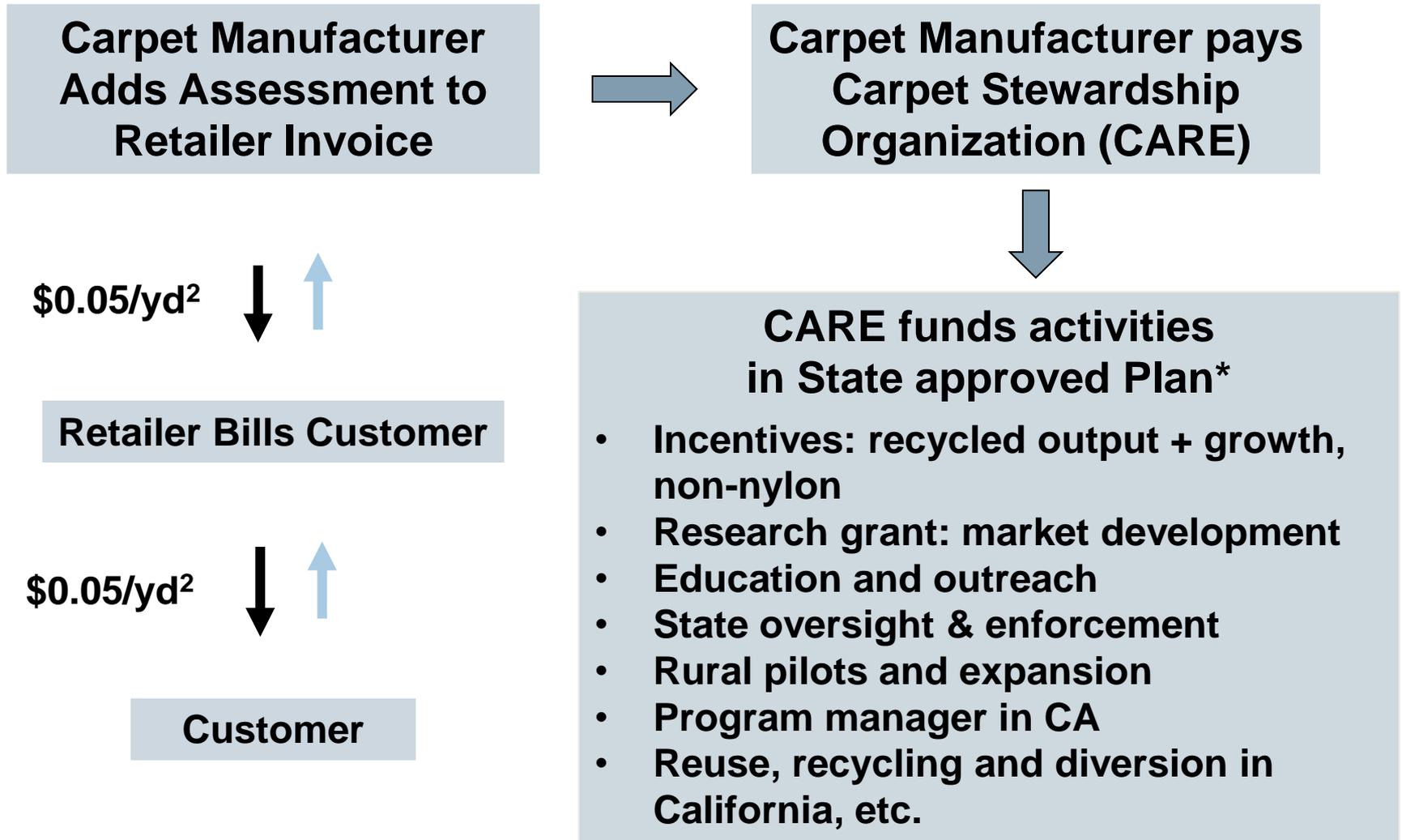
Carpet America Recovery Effort, CARE

Dr. Bob Peoples, CARE Executive Director

www.carpetrecovery.org/AB2398.php

- Only stewardship organization allowed until April 2015
- Develop and implement state-approved Plan
- Goal: continuous meaningful improvement of diversion from landfills and recycled output (specifics are in Plan)
- [Report](#) to CalRecycle on progress

Flow of Funds



State Government Role: Ensure Fairness

Oversight

- Review and approve stewardship plans
- List compliant manufacturers at website
- Review annual reports and check progress
- Ability to assess civil penalties to anyone in violation of any provision of the law



Retailers

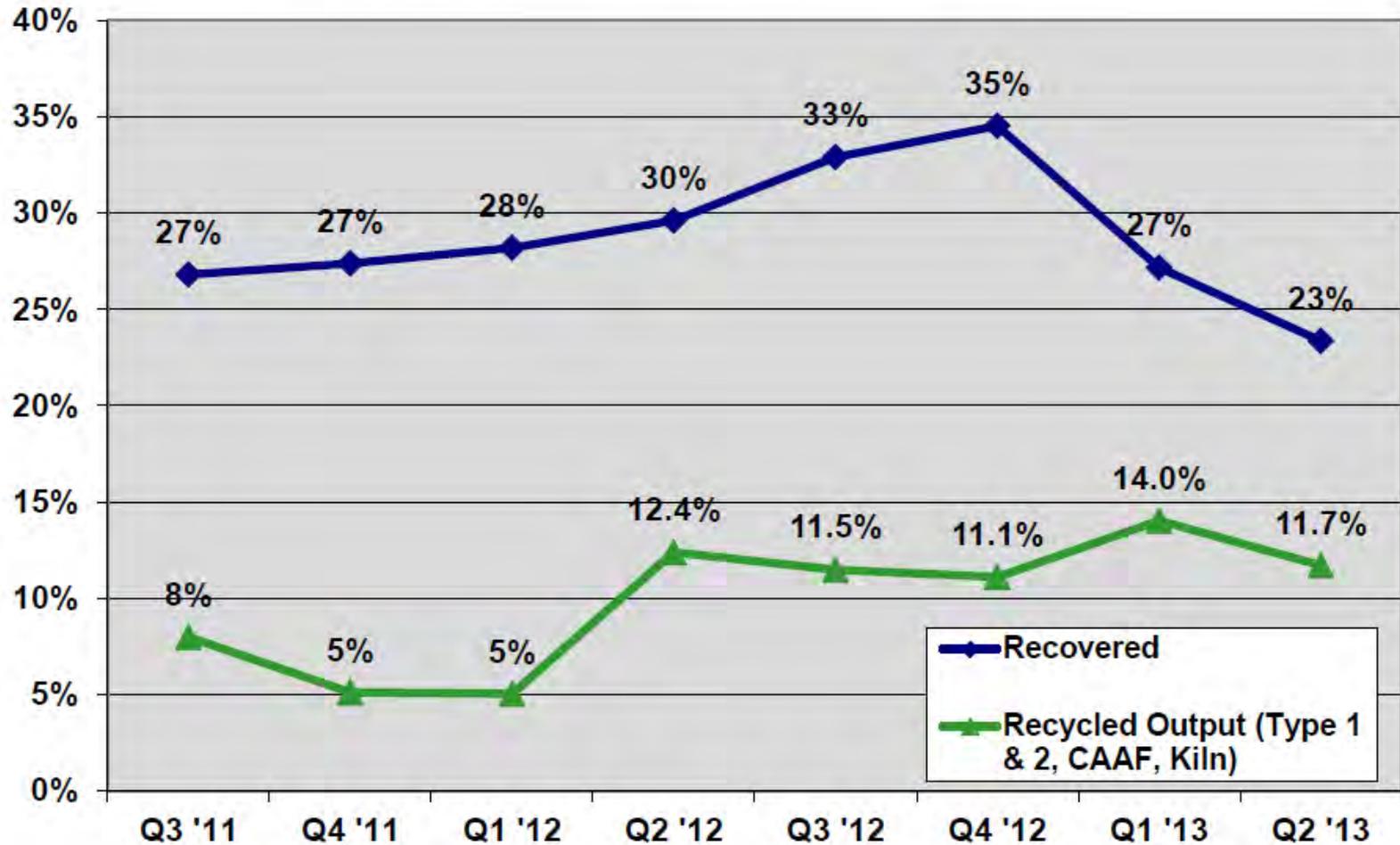
- Only sell product that is covered under an approved plan

Key Implementation Dates

AB2398 Signed by Gov	Sept 2010
CARE Collects Assessments	July 1, 2011 paid by manufacturers to CARE; visible on consumer receipt
Regulation Final	Jan. 26, 2012
CARE Submits Plan	Sept. 25, 2011 and Dec. 29, 2011
CalRecycle Approves Plan	Jan. 17, 2012 -- conditionally approved
CARE Distributes Funds to Processors	About two months after the end of each quarter
CalRecycle Lists Compliant Mfrs	July 1, 2012 - ongoing
CARE resubmits Plan	May 2013; Oct 2013
CARE Annual Report	July 1, 2013; letter Dec 2013



AB 2398 Performance Trends (percentage)



Source: CARE Q2 2013 update



Recycle Output Summary - Processors*



Cumulative pounds recycled: 71M

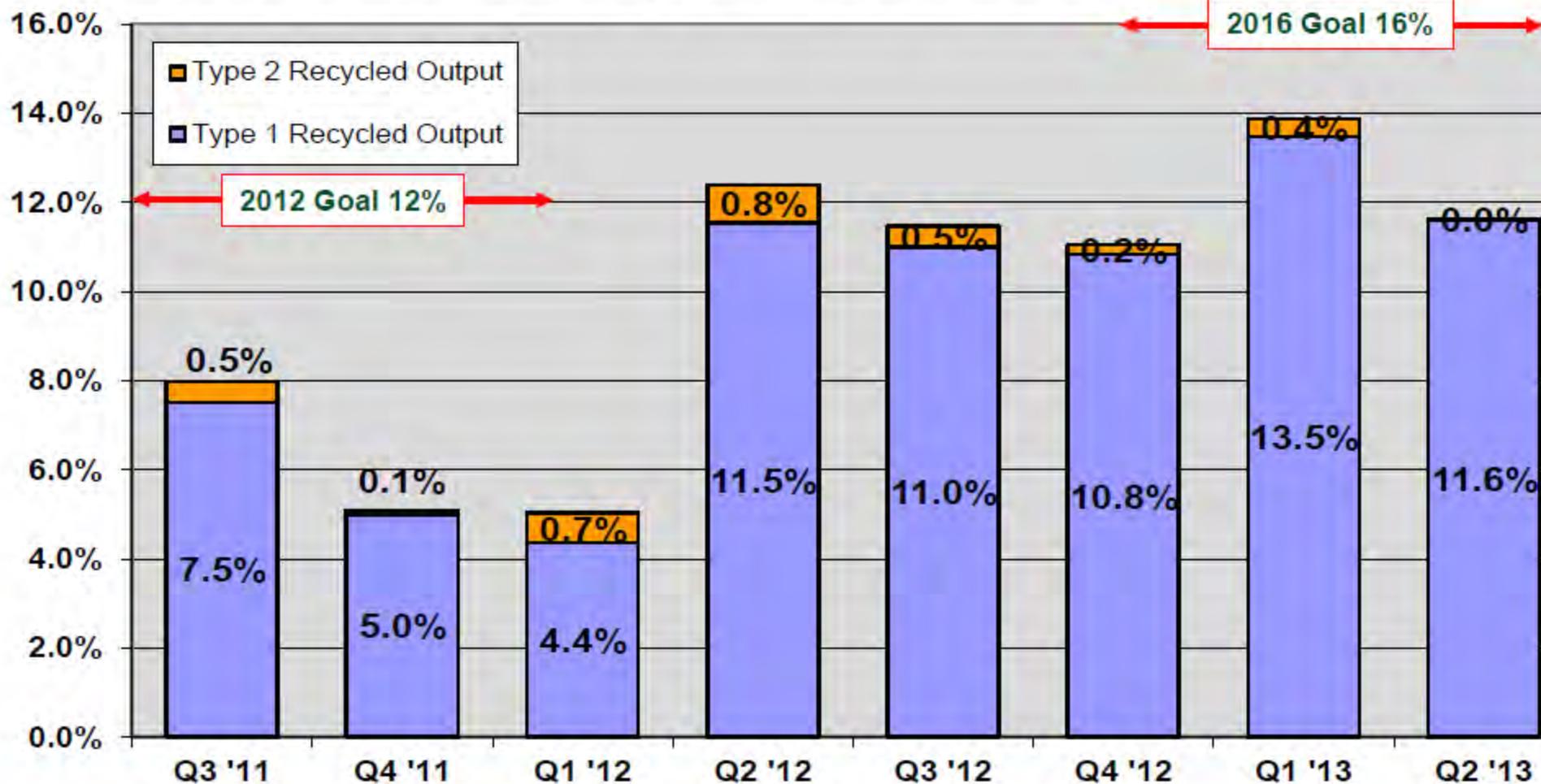
Cumulative Payments – Tier 1 Processors: \$ 4.4M



Source: CARE Q2 2013 update (does not include pounds of carpet as a rock substitute)

Recycled Output Results Compared to Plan

Recycle output rolling average over last 3 quarters = 12.1%



- Recycled output is 11.7%
- Type 2 = <1% of recycled output

Source: CARE Q2 2013 quarterly report



Growth Incentive Contributions*

Total Type 1 Pounds for Quarter	10,660,475
Target Pounds for growth incentive	8,500,000
Over (Under) Target	2,160,475
Total Growth Incentive Pool (10 cents/lb over target)	\$216,048

PROCESSORS	Type 1 standard payout	\$ 642.7K	
	Type 1 growth bonus payout	\$ 216.0K	← 25%
	Total Type 1 Payout	\$ 858.7K	
	Total Type 2 Payout	\$ 10.7K	
	Kiln	\$ 1.4K	
	Total All Processor Payouts	\$ 870.8K	←
	Non-nylon (Tier 2) Payouts	\$ 179.4K	
	Total Program payouts for quarter	\$1,050.2K	

* Payouts include Type 1, but excludes Type 2 \$\$s for Carpet Collectors



Key Performance Indicators

	6 months (Q3+Q4)	6 months (Q1+Q2)	6 months (Q3+Q4)	6 months (Q1+Q2)
	2011	2012	2012	2013
Recycled Output	6.6%	9.0%	11.3%	12.8%
Pounds collected/capita	1.6	1.7	1.7	1.5
Program Cost(\$)/capita	\$0.03	\$0.03	\$0.04	\$0.06
Program Cost/pound collected	\$0.02	\$0.02	\$0.03	\$0.04
Program Cost/pound recycled	\$0.10	\$0.07	\$0.08	\$0.10
Total program costs (incentive payments, oversight, administration) (Millions)	\$1.15	\$1.14	\$1.60	\$2.21
Balance of Funds for time period (Millions)	\$1.4	\$1.3	\$.9	\$.2

Key challenges

1. Establishing method to measure progress
2. Establishing programs in rural counties for statewide coverage
3. Finding new markets for the non-nylon carpet fibers, especially polyesters, which are increasingly used in new carpet
4. Managing the cyclical ebbs and flows of a carpet recycling system
5. Ensuring start-up companies better understand CARE's requirements, state laws and regulations, challenges of carpet recycling, etc.

Carpet Recycling: Updates from Across the Continent

Shirli Axelrod

Seattle Public Utilities

Jurisdictions with Carpet Recycling Initiatives

- California
- Washington
- New York
- Delaware
- Minnesota
- Illinois
- British Columbia

Legislative Proposals

- Minnesota
 - introduced 2013; Governor's initiative 2014
- New York
 - introduced 2011
- Delaware
 - study committee 2012
- Illinois
- British Columbia adding carpet for 2017
- (Discussed elsewhere in today's webinar: California stewardship law enacted 2010 and Washington introduced 2011 and 2012)

Work Groups, Business Assistance

- Illinois Working Group swanainninois.org/carpet.
 - Industry and government participants
 - Sub-groups to (1)encourage statewide drop-off locations; (2)promote existing programs; (3)address contamination, pre-sorting, and funding; (4) consider/recommend legislation
- North Carolina Recycling Business Assistance Center
<http://portal.ncdenr.org/web/deao/rbac>
 - Assists with financing and markets
 - Manager is advisor to CARE Board

What's Happening in Carpet Recycling

Northwest Updates

- Flooring Association Northwest
- Status of Carpet Recycle in Washington

Flooring Association Northwest

*“Raising the floor on
standards, relationships and
profitability”*

Formerly

Washington State Floor Covering Association

Terry Gillis, Carpet Committee Chairperson

More Than Carpet

The Flooring Association Northwest is the premier regional trade association for professionals in the floor covering industry.

Members include:

Retail Stores Manufacturers Distributors Installers

All aspects of the floor covering trade are represented including:

Area Rugs

Carpet and Cushion

Ceramic Tile

Hardwood Flooring

Installation Supplies

Natural Stone

Laminate Flooring

Recycling

Carpet Recycling



21255 76th Avenue S., Kent, WA
phone: 253.981.6675



A photograph of a large industrial machine, possibly a lathe or mill, in a factory. The machine is primarily grey with yellow safety guards. It features a large horizontal pipe and a vertical support structure. The background shows a wooden truss ceiling and a concrete floor. A white text box is overlaid on the center of the image.

Recovery 1, Inc.
1805 Stewart Street Tacoma, WA
253-627-1180

2013. 9. 23

95

Flooring Association Northwest

- P.O. Box 2009, Kirkland, WA 98039-2009
Phone: (425) 885-0012
Fax: (425) 869-9315
- www.wsfca.org

Is transitioning to:

- www.flooringassociation.org
- Email: info@flooringassociation.com

Status of Carpet Recycling in Washington

Kris Beatty



King County Solid Waste Division

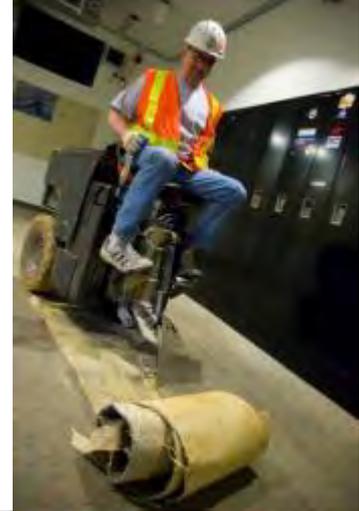
Carpet Product Stewardship Bills

- Bills introduced in 2011 and 2012 in WA
- Required carpet producers to fund and operate system to recycle discarded carpet
- Different from California's AB2398
 - AB2398 is based on incentive payments to processors and manufacturers
 - WA bills required carpet producers cover the full cost to recover and recycle carpet
- Neither bill passed
- No bill was introduced in 2013 in WA



Demand for Carpet Recycling

- Private businesses
 - Medical facilities, major hotels, office complexes
- Public entities
 - Univ. of Wash., City of Seattle, King County, State of Washington, US GSA
 - Federal agencies use NSF/ANSI 140 Gold certification level
- Flooring contracts
 - US Communities flooring contract
 - Washington State flooring contract



Carpet Sellers



- Many carpet sellers continue to recycle
- Collection
 - Dumpsters at store locations serviced by hauler
 - Installers haul directly to processing facility
- Some conduct customer education
- Preference for local processing over use of manufacturers' distant facilities
- Asbestos contamination

Collection, Sorting & Hauling



- Flooring contractors deliver
- Collection and hauling services provided to
 - Carpet sellers
 - Construction project customers
- Delivered to
 - material recovery facilities
 - processor
- Material recovery facilities
 - carpet sorted from other construction and demolition materials
- Public Transfer Stations – do not receive carpet for recycling

Carpet Processing

Again

Kent, WA



Carpet Processing
& Recycling, LLC

Tacoma, WA



Recovery 1

- Urban Energy – Bellingham, WA
- Los Angeles Fiber Company – Vernon, CA
- Carpet manufacturers' programs
- ~~Carpet Collectors~~

Carpet Markets

Limited in Washington

Agrestal Designs – tiles
and home products

Made with calcium
carbonate from post-
consumer carpet

Green Dot Concrete
poured concrete additive



Let's hear from businesses.

Click the "Raise Hand" button in the control panel if you have an update to contribute!



Carpet Recycling Progress Update

Shirli Axelrod

Seattle Public Utilities



Recent Actions in Washington

1. Seattle Landfill Ban in 2015
2. Market Development Advisory Committee
3. Outreach Project
4. Best Practices for Carpet Removal

Seattle Recycling Requirements

- New Solid Waste and Building Codes effective January 2014
- Carpet one of several materials that cannot be landfilled as of January 2015
- City Council adopted ordinance after meetings with and input from building and solid waste industries
- Seattle's had landfill bans in place for years, applicable to businesses and residents
- Markets always considered; flexibility expected



Building Material Landfill Disposal Bans

Material	1/1/12	1/1/13	1/1/14	1/1/15	1/1/16
Asphalt Paving	Educate	Enforce			
Concrete & Bricks	Educate	Enforce			
Metal & Cardboard			Educate	Enforce	
New Gypsum Scrap			Educate	Enforce	
Carpet				Educate	Enforce
Plastic Film Wrap				Educate	Enforce
Unpainted & Untreated Wood				Educate	Enforce
Asphalt Roofing Shingles				Educate	Enforce

Enforce – a fine possible if “significant” amounts in disposal container or transfer station loads

Market Development Advisory Committee, January-May 2013

- Plastics molders
- Carpet processors
- Business entrepreneurs
- Engineering academics



Advisory Group Findings, Follow-Up

- Potential products for use in recycling processes
- Plastics for lids, containers, sorting equipment
- Aggregates for local highway, utility, transit projects
- Bring together local producers and end users



Working Together to Increase Carpet Recycling in Washington



- Who: Seattle and King County with new partner Zero Waste Washington
- What: Build on existing efforts
- How: Expand and deepen the conversation with parties who have an interest in recycling carpet

Working Together, continued:

- Why now:
 - Learn from some we haven't met with before
Examples of additional parties: multi-product stores offering carpet and installation; property managers; associations
 - Explore what recycling system/policies will work best
 - Build broader coalition to increase recycling in WA

Working Together, continued:

Actions:

- This webinar, widespread invitations
- One of the first stages: meeting in person with around 20 individuals
- On-line survey
- Move on to additional steps arising out of conversations



Best Practices for Carpet Removal

**Carpet Removal
Best Practices for Carpet Recycling
Field Guide**

For preparing carpet for recycling in Washington state



This field guide is based on the 2011 Carpet Removal Best Practices for Carpet Recycling (Best Practices) developed by King County LinkUp in partnership with members of the carpet industry, carpet recyclers, Washington Department of Labor & Industries, and the Puget Sound Clean Air Agency. The goal of the Best Practices is to facilitate proper removal of post-consumer carpet that is suitable for recycling. The guide is not intended to serve as a substitute for communicating with the recycling facility or understanding and complying with regulations. King County accepts no responsibility or liability for ensuring compliance with applicable regulations or guaranteeing the acceptance of carpet for recycling if these best practices are followed.

King County LinkUp

To download the complete 2011 Carpet Removal Best Practices guide, please visit: <http://kingcounty.gov/linkup>

Why recycle carpet?

Carpet recycling recovers valuable materials that can be used to make new products. Flooring professionals who recycle carpet could save on-needed disposal fees, which are often higher than recycling fees. And, recycling is increasingly important to flooring customers.

About asbestos

Asbestos is a regulated substance that can cause lung disease when inhaled. Asbestos is sometimes found in flooring and flooring-related materials. Follow the instructions in this field guide to reduce the risk of asbestos exposure.

Keep carpet clean and dry prior to recycling

When possible, remove carpet before other construction or demolition activities. Otherwise:

- Protect carpet with plastic sheeting, plywood or a drop cloth.
- Keep other work areas clean to avoid transferring contaminants on shoes.
- Seal ductwork.
- Mask off stairways to other work areas.



Materials that could contain asbestos:

- Vinyl sheet flooring
- Vinyl floor tile
- Planked flooring
- Asphalt flooring
- Construction and flooring mastics
- Laminating compound
- Sub flooring slip sheet

If carpet is contaminated with debris, does the debris include a material that might contain asbestos?

Yes: Obtain and review a copy of the project asbestos survey report from the building owner, project supervisor, or prime contractor. If the survey shows asbestos present, the carpet can't be recycled. An asbestos abatement company must remove the debris and carpet.

No: Remove debris before carpet removal. The carpet probably cannot be recycled if the debris can't be removed (for example, paint). Check with the recycler.

For more information about these best practices, contact:
 Kim Beatty - LinkUp
 King County Solid Waste Division
<http://linkup.kingcounty.gov>
 206-296-5146
www.kingcounty.gov/solidwaste



Alternative Formats On Request
 206-296-4466 • TTY Relay: 711 • 1-800-325-6165 ext. 6-4466

Prepare carpet for recycling

The building owner is always required to have an asbestos survey before removing glued-down carpet. Prior to removing glued-down carpet, you **MUST** obtain the asbestos survey report from the building owner, project supervisor, or prime contractor.

Does the survey say there is asbestos?

Yes: A certified abatement company must remove the carpet and asbestos-containing debris.

No: Remove the carpet in a way that meets carpet recycler requirements:

- Clear debris from the carpet, such as pins, needles and staples.
- Minimize other materials attached to the carpet, such as tiles, sheet flooring and tape.
- Vacuum remaining debris or collect in garbage bags.

Prior to removing stretched carpet, you may need to obtain an asbestos survey report from the building owner, project supervisor, or prime contractor.

Is it likely that removing the carpet will disturb material that might contain asbestos?

Yes: Obtain an asbestos survey report. If the survey shows asbestos present, the carpet can't be recycled. An asbestos abatement company must remove the debris and carpet.

No: Remove the carpet in a way that meets the requirements of the carpet recycler.

- Clear debris from the carpet, such as pins, needles and staples.
- If removing tack strips, collect them in the box that contained the new tack strips or bundle them with tape or rags.
- Vacuum remaining debris or collect in garbage bags.

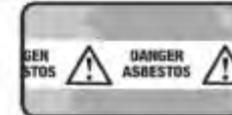


Minimize other materials attached to the carpet.

If you find possible asbestos

If material possibly containing asbestos is observed in the process of removing stretched carpet and you're not specially trained to handle it:

- Exit the area immediately and notify the building owner, project supervisor, or prime contractor.
- Don't enter the site until a Certified Asbestos Supervisor has been there and says it is OK to enter.



After carpet removal

Keep the carpet in a covered container prior to and during transportation to the recycler to protect it from moisture.

Additional Resources:

- Puget Sound Clean Air Agency Asbestos Technical Support: 206-489-4000
- Washington State Labor & Industries (L&I) Asbestos Program: 360-402-5514
- L&I List of Asbestos Abatement Contractors: www.wa.gov/LinkUp/AsbestosAbatementContractors.pdf
- Carpet America Recovery Effort's list of carpet recycling companies: www.carpetrecycling.com
- What do I do with...? source for recycling companies in the King County area: kingcounty.gov/WhatToDoWith

To help installers, haulers, and others, this guide is the product of a joint workgroup and available in English and Spanish.

<http://your.kingcounty.gov/solidwaste/linkup/documents/carpet-field-guide-best-practices.pdf>

What's Happening with Carpet Recycling



What's Happening with Carpet Recycling

What's next?

Kris Beatty



King County Solid Waste Division

CARE 2014 Annual Conference in Seattle!

- May 6-8, Seattle Renaissance Hotel
- Co-presentation at WA State Recycling Association Annual Conference
- <http://carpetrecovery.org>
- Join us! We're looking forward to seeing you.



What's Happening with Carpet Recycling

- Webinar follow-up e-mail
 - Will be posted on King County LinkUp website at www.kingcounty.gov/linkup (under carpet)
 - Webinar recording
 - Written update on carpet recycling
 - Questions and answers
- Carpet recycling outreach project email – WA focused
 - Introduction to the project
 - Online survey

Thank You for Participating!



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