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](http://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

Carpet Manufacturer Adds Assessment to Retailer Invoice

Carpet Manufacturer pays Carpet Stewardship Organization (CARE)

CARE funds activities in State approved Plan*

- Incentives: recycled output + growth, non-nylon
- Research grant: market development
- Education and outreach
- State oversight & enforcement
- Rural pilots and expansion
- Program manager in CA
- Reuse, recycling and diversion in California, etc.

Source: adapted CARE presentation 2012, *activities include those anticipated in updated Plan fall 2013
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
CARE Collects Assessments

Regulation Final

CARE Submits Plan

CalRecycle Approves Plan

CARE Distributes Funds to Processors

CalRecycle Lists Compliant Mfrs

CARE resubmits Plan

CARE Annual Report

Sept 2010

July 1, 2011 paid by manufacturers to CARE; visible on consumer receipt

Jan. 26, 2012

Sept. 25, 2011 and Dec. 29, 2011

Jan. 17, 2012 -- conditionally approved

About two months after the end of each quarter

July 1, 2012 - ongoing

May 2013; Oct 2013

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*

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Type 1 Pounds for Quarter</td>
<td>10,660,475</td>
</tr>
<tr>
<td>Target Pounds for growth incentive</td>
<td>8,500,000</td>
</tr>
<tr>
<td>Over (Under) Target</td>
<td>2,160,475</td>
</tr>
<tr>
<td>Total Growth Incentive Pool (10 cents/lb over target)</td>
<td>$216,048</td>
</tr>
</tbody>
</table>

### Processors

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1 standard payout</td>
<td>$642.7K</td>
</tr>
<tr>
<td>Type 1 growth bonus payout</td>
<td>$216.0K</td>
</tr>
<tr>
<td>Total Type 1 Payout</td>
<td>$858.7K</td>
</tr>
<tr>
<td>Total Type 2 Payout</td>
<td>$10.7K</td>
</tr>
<tr>
<td>Kiln</td>
<td>$1.4K</td>
</tr>
<tr>
<td>Total All Processor Payouts</td>
<td>$870.8K</td>
</tr>
<tr>
<td>Non-nylon (Tier 2) Payouts</td>
<td>$179.4K</td>
</tr>
<tr>
<td>Total Program payouts for quarter</td>
<td>$1,050.2K</td>
</tr>
</tbody>
</table>

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

Source: CARE Q2 2013 quarterly report
# Key Performance Indicators

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

  - 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

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

• 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
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

<table>
<thead>
<tr>
<th>Material</th>
<th>1/1/12</th>
<th>1/1/13</th>
<th>1/1/14</th>
<th>1/1/15</th>
<th>1/1/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Paving</td>
<td>Educate</td>
<td>Enforce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete &amp; Bricks</td>
<td>Educate</td>
<td>Enforce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal &amp; Cardboard</td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
<td></td>
</tr>
<tr>
<td>New Gypsum Scrap</td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
</tr>
<tr>
<td>Plastic Film Wrap</td>
<td></td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
</tr>
<tr>
<td>Unpainted &amp; Untreated Wood</td>
<td></td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
</tr>
<tr>
<td>Asphalt Roofing Shingles</td>
<td></td>
<td></td>
<td></td>
<td>Educate</td>
<td>Enforce</td>
</tr>
</tbody>
</table>

*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

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

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](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](http://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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