CARE 2012 Annual Report

Table of Contents

CARE Mission Statement, Vision and Core Values 3
CARE 2012 Leaders 4
Message from the CARE Chairman of the Board 5
Message from the CARE Executive Director 6
Key Results for 2012 7
Annual Survey Results 9
Evaluation of Progress, 2012 10
Qualitative Results from Annual Survey 19
Summary 20
Survey Methodology 21
CARE Outreach Results, 2012 23
CARE Website Traffic 24
Carpet Industry Initiatives 26
Appendix 1, CARE Annual Survey 34
Appendix 2, Definitions 42
Appendix 3, CARE Board of Directors, 2012 45
Mission Statement

The mission of CARE is to advance market-based solutions that increase landfill diversion and recycling of post-consumer carpet, encourage design for recyclability and meet meaningful goals as approved by the CARE Board of Directors.

Vision

Post-consumer carpet diversion and recycling are economically, socially and environmentally sustainable for all stakeholders.

Core Values

We believe in:

• Market-Based solutions
• Entrepreneurship
• Hierarchy of Waste Management
• Sustainable practices (economic, social and environmental)
• Resource conservation
• Transparency
• Multi-stakeholder collaboration
• Professional ethics and integrity
• Anti-trust compliance
CARE 2012 Leaders

Sustainability Leaders

Aquafil USA
Beaulieu of America
Interface Americas
J & J Industries
Milliken & Company
The Mohawk Group
Shaw Industries
Tandus Flooring
Universal Fibers
Wellman Plastics

Friend of CARE

Polymer’s Center for Excellence

CARE Members

We now have 452 members of CARE. Please visit www.carpetrecovery.org for a complete list of CARE members.
Chairman of the CARE Board of Directors Letter

The Carpet America Recovery Effort turns eleven this year, and it has been my privilege to be involved with this organization for all of that time. It’s been a big year for CARE – significant increases in recycling and diversion, and six quarters of data from California AB 2398 we must analyze and evaluate. California is an ongoing experiment that so far has offered both encouraging results and significant challenges.

As I am sure you are aware, there are several states considering laws that would mandate the activities CARE members have been working so hard all these years to figure out on their own. I understand the temptation on the part of governments and other often well-meaning groups to solve problems by passing laws, but to me, that’s taking the easy way out. If an idea isn’t going to work, no law is going to make it financially viable. And good ideas don’t need laws to make them fly.

The numbers are in: CARE is doing what it was designed to do; helping find market-based solutions to landfill diversion of post-consumer carpet. I am encouraged by the progress and I have ultimate faith in the free markets. CARE is a close-knit organization whose strength lies in its people. I thank Georgina Sikorski for her dedication and past service to CARE as I welcome our founding Executive Director Bob Peoples back on board. I extend my heartfelt thanks to the excellent CARE Board of Directors, and say congratulations to Anthony Cline for another successful year at CARE.

Warm regards,

Werner Braun
Chairman, CARE
Dear Fellow CARE Members,

Returning to CARE after almost five years in Washington, D.C. has given me a great opportunity to view our progress from a unique perspective. Those who have heard me speak since my return know that I am fond of saying that CARE is an organization that truly lives its mission. Not only do we recycle post-consumer carpet, but we recycle our Executive Directors! More importantly, I have said many times since our humble beginnings, success is perseverance for one more minute. I am pleased to see so much progress.

Much has changed at CARE in the last five years and perhaps the most significant change has been the implementation of California’s AB 2398 regulation mandating collection of a Carpet Stewardship Assessment used to provide incentives to processors of post-consumer carpet. While it is hard to argue with the successful growth of landfill diversion of post-consumer carpet in California, we are still early in our understanding of what it takes to successfully implement such a program. After 6 quarters of operation we have learned many valuable lessons which you can read about in this report. Efforts in California have emboldened other states to look at similar legislation. 2013 should be a very interesting year on the extended producer responsibility front.

Another major shift has been the engagement of CARE’s Board of Directors in driving programs forward. This is a wonderful development. Our board has been expanded and all the talent, energy and passion have been focused on board committees who tackle the real work of CARE, driving progress and making key decisions. I would like to acknowledge the excellent work of our former Executive Director, Georgina Sikorski, in facilitating both the drive to implement the draft California Stewardship Plan and growth of the Board’s role.

Our 2012 CARE Annual Survey once again revealed a wealth of information and insights into recycling post-consumer carpet. Coupled with our excellent data on California recycling activities, I think you will find this year’s report full of useful information. We had 39 respondents for 2012 and we can now add six quarters of California data to the mix. One clear signal is the alarming trend in polyester (PET) face fiber growth. The reason for concern is a lack of viable outlets for this material. Polyester is expected to continue its growth in the residential sector increasing pressure on both producers and recyclers to find value-added outlets for this material.

Finally, I would like to say it is good to be back among friends and colleagues. I told the story many times in Washington, D.C. of the great progress being made by the carpet industry. Yes, we have had our differing opinions, but it is always done in a respectful and courteous manner making it enjoyable to work on such an important challenge. When we started in 2002 I said we were building a brand new industry in the United States. Today almost 30% of all recycled post-consumer carpet goes back into carpet and other consumer products – that’s amazing. It is gratifying to see just how far we have come in such a short time. I want to thank our members and our board for all their hard work and dedication to make such progress possible.

Sincerely,

Robert Peoples, Ph.D.
Executive Director, CARE
Key Results for CARE in 2012


Net Income (revenues minus expenses) through December 2012 was $85,400, a decrease of $38,300, or -31% versus 2011.

Balance Sheet

- Total assets at end of December 2012 were $468,000.
- Members’ equity was $426,300, up by $85,400 (25%) versus December, 2011.

Business Results, 2012

- In 2012, CARE now has 452 members, an increase of approximately 13% versus 2011.
- Respondents to the CARE Survey employ 1,318 people in local communities across the United States, a decrease of 144 or -10% versus 2011.
- In 2012, CARE members diverted 351 million pounds of carpet from the landfill, which is an increase of +5% over the reported 2011 diversion of 333M pounds.
- In 2012, CARE members recycled 294M pounds of carpet compared with 251M pounds in 2011 (+17%).
- Since it was founded in 2002, CARE members have diverted over 2.6 billion pounds of post-consumer carpet from landfills in the United States.
- The CARE Certified Collector Program launched at the CARE Annual Conference in April, 2012. Currently, about 75 collectors and processors have signed up as CARE Certified Collectors, and can be found at: http://carpetrecovery.org/collector-finder/index.html
- CARE participated in the MOU 2012 negotiations with key stakeholders, and while the MOU Joint Committee agreed to suspend negotiations fall 2012, a full summary report was approved by the Joint Committee and is posted on the CARE website.

California AB2398 Results for July 2011 – December 2012

This section of our 2012 annual report will summarize results associated with the California Carpet Stewardship Plan. It is important to note that under AB 2398 CARE is required to submit an annual report to CalRecycle which is due on July 1, 2013. As a result, this summary will provide a high level overview of results through 6 quarters of operation (i.e., 3rd quarter 2011 through 4th quarter 2012). Our goal will be to highlight the trends over those 6 quarters and call out key learnings. A more detailed analysis will be issued as part of the formal report to CalRecycle in July 2013.

Each quarter CARE produces a slide deck that summarizes results from the previous quarter which is posted to both the CARE and CalRecycle websites. The following information summarizes recent results and trends.
- CARE is currently operating under a draft Carpet Stewardship Plan approved by CalRecycle. A final plan, incorporating learnings from the first 7 quarters is due to CalRecycle by May 31, 2013.
- Carpet sales into California over the last 6 quarters have averaged 24M square yards per quarter with cumulative sales of 144.7M square yards.
- The average recycle output over 6 quarters is 11.3% with a goal by 2015 of 12%.
- Trend data show a moderate growth in recovery and recycle of post-consumer carpet in 2012.
• 80 carpet mills are registered with CARE as participants in the CARE Carpet Stewardship Plan. As members of the CARE Plan, these manufacturers meet the regulatory requirements to sell carpet in the State of California. As part of the AB 2398 requirements, these manufacturers report their sales and assessment data quarterly.

AB 2398 Results Calendar Year 2012

• In 2012, an estimated 343.2M pounds of post-consumer carpet was destined for landfills in California. About 112M pounds was recovered from California landfills (33%).
• In 2012, approximately 48.2M pounds (14%) of post-consumer carpet output such as fiber and filler were recycled into useful products, (i.e., this recycled output did not get sent to the landfill).
• In 2012, data shows 2.97 pounds of post-consumer carpet was recovered per capita in California.
• Total remittances made by the 80 manufacturers registered with CARE, for 2012 were $4.7M.
• Processors requesting funds from AB 2398 diverted 112M pounds in 2012.
• Processors recycled (recycled output) 48.2M pounds in 2012.
• Qualified processors received $2.462M in 2012.
• Expenses for 2012 were estimated at $468,000 in 2012 (6% of remittances).
• Unused funds at the end of 2012 were $1.8M.

Figure 1 gives a graphical trend of recovery and recycled output over six quarters. The program was implemented in the 3rd quarter, 2011. Traditionally 1Q and 4Q results are weaker due to the normal selling season cycle. The unanticipated drop seen in Q3 is attributed to loss of a significant Type 2 outlet.

Figure 1: California Recovered Carpet vs. Recycle Output Trends
California Rural County Program

As part of the Carpet Stewardship Plan, CARE works in partnership with CalRecycle, the Rural Counties’ Environmental Services Joint Powers Authority, local governments, and other interested parties on an ongoing project to evaluate a post-consumer carpet recycling model in six rural counties of California. The purpose of this project is to determine if a carpet recycling model may be successful, economically feasible, and provide a cost savings versus landfilling post-consumer carpet.

- A one year rural pilot collection project was completed in February, 2013
- Fifteen trailers (28 feet) were filled averaging 13,500 pounds per trailer.
- Analysis of the rural pilot outcome is underway.

CARE 2012 Annual Survey Results

Each year, as required by the CARE Bylaws, CARE prepares an annual survey to report on carpet diversion and recycling results achieved by the respondents to the annual survey. All information from respondents is confidential. The collected information is aggregated and analyzed for the annual report. An effort is made to graphically display temporal trends.

Annual Survey Methodology

In order to form a complete picture of the Carpet Recycling Industry, CARE asked respondents to the annual survey to report on the following:

- Amount of post-consumer carpet diverted and recycled
- Recycling versus other end-uses for the material diverted (i.e. reuse, end-product manufacturing, alternative fuel (CAAF), cement kiln, waste-to-energy, and landfill)
- End products manufactured from recycled material
- Steps in the recycling process performed by the respondent
- Types and amounts of carpets recycled, by fiber type
- Geographical locations and employment information
- International versus domestic customers (outlets)

In addition to the quantitative information sought, CARE also requested input on CARE’s organizational performance and the value of CARE to the respondents. This information is used to improve CARE’s operations and resources.

For the 2012 CARE Annual Survey, CARE contacted 40 members at a personal level as well as sending the survey to our over 400 members. Of those directly contacted, 39 responded. As noted, the response rate of those who handled the vast majority of post-consumer carpet was high, providing good confidence in data quality and demonstrating a strong commitment to the mission of CARE. However, it is important to recognize that even with a higher response rate, data is missing from a number of companies involved in carpet recycling. Because we received responses from most of the major businesses engaged in carpet recycling, we estimate that the survey includes more than 90% of the volume of carpet diverted and recycled in the U.S. in 2012. Thus, as in all previous years, it is likely that the survey captures the majority of the post-consumer carpet recycling that occurred in 2012.

A copy of the survey tool is attached at the end of the annual report in Appendix A.
As always, CARE assessed the responses received and followed up as needed with individual companies to maximize participation and to ensure we minimize (or eliminate) double-counting wherever possible. By so doing, the reported data is more accurate and reflects a truer picture of the amount of carpet diverted and recycled in 2012.

CARE makes no warranty as to the accuracy of this data and assumes no responsibility for how this information is used by individuals or companies and makes no warranties for its use.

### Evaluation of Progress in 2012

**Carpet Discard Methodology**

In 2011, the CARE BOD adopted a new formula for calculating carpet discards, which more accurately reflects actual sales and carpet discards in the United States. This formula replaced the MOU forecasts developed in 2002, which did not include updated information on sales of carpet, and therefore, carpet discards, in the United States. Thus, the new formula will give a truer picture of both diversion and recycling rates for future reports. Further, this formula was approved for use by the MOU 2012 Joint Committee while it was in session. Finally, in the fall of 2012, CalRecycle agreed to the use of this formula for calculations involving post-consumer recycling in the state.

The purpose of the methodology is to be able to update the discards on an annual basis, using actual sales data, and upgraded by factors that influence the calculation. Those factors include changes in imports/exports, percent of the market that is replacement, average weight, and demolition.

**Formula for Calculating Carpet Discards**

\[
\text{Discards} = ((S \times R) \times P) + D
\]

The factors used to calculate the amount of carpet available for diversion include:

- **S** = Carpet sales for the reporting period (Note: Carpet Sales data will come from an outside market research firm)

- **R** = Percent of carpet that is replacement, or carpet replacing existing carpet. Replacement carpet is the carpet destined for the landfill. For 2012, the replacement percent was taken as 85%

- **P** = Average weight of carpet per square yard. In 2012, the average weight was 4.2 lbs/square yard

- **D** = Pounds of carpet from demolition projects not replaced. For 2012, the demolition rate was 1.3%.

351M pounds of post-consumer carpet diversion in 2012, a diversion rate of 10%.

294M pounds of post-consumer carpet recycled in 2012, a recycling rate of 8%.

Cumulative diversion since 2002 exceeds 2.6 billion pounds.

Table 1 shows a comparison by pounds and percentage of the quantity of post-consumer carpet recycled and diverted from landfill from 2002 through 2012, using the new methodology for measuring carpet discards.
Table 1: Post-Consumer Carpet Recycling and Diversion, 2002-2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Discards*</td>
<td>4,409</td>
<td>4,396</td>
<td>4,588</td>
<td>4,915</td>
<td>4,687</td>
<td>4,560</td>
<td>4,228</td>
<td>3,715</td>
<td>3,373</td>
<td>3,816</td>
<td>3,540</td>
</tr>
<tr>
<td>Diversion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reuse</td>
<td>9</td>
<td>0</td>
<td>0.3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>High Value Recycled</td>
<td>247</td>
<td>260</td>
<td>3</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Value Recycled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Recycled</td>
<td>46</td>
<td>87</td>
<td>98</td>
<td>194</td>
<td>239</td>
<td>275</td>
<td>243</td>
<td>246</td>
<td>271</td>
<td>250</td>
<td>294</td>
</tr>
<tr>
<td>TOTAL Reuse + Recycle</td>
<td>55</td>
<td>87</td>
<td>98</td>
<td>194</td>
<td>239</td>
<td>175</td>
<td>247</td>
<td>258</td>
<td>273</td>
<td>251</td>
<td>299</td>
</tr>
<tr>
<td>Waste-to-Energy</td>
<td>1.9</td>
<td>7</td>
<td>9</td>
<td>27</td>
<td>21</td>
<td>19</td>
<td>41</td>
<td>47</td>
<td>38</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>CAAF or Cement Kiln</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>12</td>
<td>26</td>
<td>36</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>TOTAL Diverted from Landfill</td>
<td>57</td>
<td>94</td>
<td>108</td>
<td>224</td>
<td>260</td>
<td>296</td>
<td>290</td>
<td>317</td>
<td>337</td>
<td>333</td>
<td>351</td>
</tr>
<tr>
<td>Recycling Rate</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Diversion Rate</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>9%</td>
<td>10%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

* Discard data derived from independent Torcivia report on total U.S. sales estimates.

Figure 2 is a plot of the historical trend of post-consumer carpet pounds diverted from national landfills each year since 2002. At least a portion of the increase noted may be attributed new collectors/processors reporting for the first time along with improving markets. For definitions of the terminology used in this report, please see Appendix 2.

Figure 2: Historical Post Consumer Diversion

Because 2012 was the last year of the existing MOU (MOU 2002), it is also important to note the actual results versus the goals established in the 2002 MOU as shown in Table 2.
Table 2: MOU 2002 Forecasts and Goals vs. Actual Results 2002-2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MOU Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Discard (lb)</td>
<td>4,678</td>
<td>4,282</td>
<td>4,537</td>
<td>5,038</td>
<td>5,261</td>
<td>5,590</td>
<td>5,642</td>
<td>5,887</td>
<td>6,020</td>
<td>6,605</td>
<td>6,772</td>
</tr>
<tr>
<td>Recycling Rate</td>
<td>3.8%</td>
<td>7%</td>
<td>10%</td>
<td>11%</td>
<td>19%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversion Rate</td>
<td>3.8%</td>
<td>7%</td>
<td>10%</td>
<td>11%</td>
<td>19%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual Results</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discard (M lb)</td>
<td>4,409</td>
<td>4,396</td>
<td>4,588</td>
<td>4,916</td>
<td>4,687</td>
<td>4,560</td>
<td>4,228</td>
<td>3,718</td>
<td>3,373</td>
<td>3,816</td>
<td>3,540</td>
</tr>
<tr>
<td>Recycling Rate</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Diversion Rate</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

CARE has established goals for 2012-2016 for both post-consumer carpet diversion and recycling. These goals may also be found in the industry MOU 2012 Summary Report. It should be noted that while there is no agreed upon MOU at this time, CARE is committed to working toward these goals in the future which were approved by the board of directors in 2012. Table 3 summarizes 2012 actual vs. forecast and the 2013-2017 goals.

Table 3: CARE Actual and Goals, 2012-2017

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Discards*</td>
<td>3854</td>
<td>3540</td>
<td>3575</td>
<td>3611</td>
<td>3647</td>
<td>3684</td>
<td>3721</td>
</tr>
<tr>
<td>Diversion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reuse</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Value Recycled</td>
<td>260</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Value Recycled</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Recycled</td>
<td>351</td>
<td>294</td>
<td>358</td>
<td>397</td>
<td>438</td>
<td>442</td>
<td>446</td>
</tr>
<tr>
<td>Total Reuse + Recycle</td>
<td>299</td>
<td>299</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste-to-Energy</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAAF or Cement Kiln</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL Diverted from Landfill</td>
<td>493</td>
<td>351</td>
<td>536</td>
<td>614</td>
<td>693</td>
<td>737</td>
<td>744</td>
</tr>
<tr>
<td>Recycling Rate</td>
<td>9%</td>
<td>8%</td>
<td>10%</td>
<td>11%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Diversion Rate</td>
<td>13%</td>
<td>10%</td>
<td>15%</td>
<td>17%</td>
<td>19%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

The data in Figure 3 shows that 74% of post-consumer carpet collected in 2012 was sent to processors to be recycled.
Companies Handling Post-Consumer Carpet

Survey respondents were asked to characterize the nature of their businesses into one or more of the following categories, which are listed and defined below:

Collection Point – A company that collects used carpet from the point of generation and transports it to a sorting, processing or waste management facility.

Collector/Sorting Facility – A facility that separates waste materials (including used carpet) from a mixed waste stream. The end result of this process is used carpet that is separated from other materials.

Processor – A company or facility that takes used carpet (whether handled by a sorting facility or brought directly by a collector) and processes it for use as a feedstock in a manufacturing facility.

Manufacturer – A company or facility that utilizes processed carpet materials and transforms them into other products, or uses them as raw materials in a manufacturing process.

The breakdown of services provided by CARE Annual Survey Respondents is shown in Figure 4.
It can be seen from Figure 4 that there is significant diversity in the types of companies contributing to the diversion of post-consumer carpet in 2012. In 2012, companies continued to diversify their service offerings to include more than one step in the carpet recycling process. This overlap in function exacerbates the challenge of accurate diversion reporting. It should be noted that a correction of 15.8M pounds was made for over counting in the 2012 survey.

Engineered Resins: The Most Common End Product Manufactured from Post-Consumer Carpet

Respondents indicated that 63% of the recycled post-consumer carpet is manufactured into engineered resins. This is an increase from 58% in 2011 and reflects the fact that this market outlet is vital to the recycle of post-consumer carpet. It is also noteworthy that 27% of the recycled post-consumer carpet is manufactured back in post-consumer carpet either as carpet fiber (15%) or carpet backing (12%). While fiber pad (cushion) sales represent less than 5% of the today’s market, it remains an important outlet for post-consumer carpet. Of all post-consumer carpet that is recycled about 9% goes to carpet cushion.
Figure 5: 2012 End Product Markets for Post-Consumer Carpet

U.S. Continues to Be Primary Market for Post-Consumer Carpet Material
Once again, in 2012, almost 90% of the post-consumer carpet material processed was used within the U.S.

Figure 6: Destination of Post-Consumer Carpet Processed in 2012

Nylon 6 and Nylon 6, 6 Fibers Were 71% of the Fiber Type Sorted in 2012
The CARE survey included information on the types of carpet face fiber collected or sorted by Survey respondents. In 2012, N6 and N6,6 fibers accounted for 59.4% (down from 67%) of the total sorted carpet fiber. The percentage breakdown continues to shift in favor of Nylon 6 (N6) accounting for 34.4% of the total and Nylon 6,6 (N66) accounting for 25% (down from 32% in 2011) of the total. Polypropylene (PP) fiber represented 11%. A significant shift in face fiber continues with the expansion of polyester (PET) which has grown to 24% of the total collection stream. This is important to note since there are no significant higher value outlets for post-consumer PET carpets at this time other than fiber pad.

**Figure 7: Post-Consumer Carpet Fiber Type, 2012**

![Pie chart showing fiber types]

- N6: 25.0%
- N66: 34.4%
- PP: 11.4%
- PET: 23.8%
- Other: 5.5%

NOTE: N6 = Nylon 6; N66 = Nylon 6,6; PP = Polypropylene; PET = Polyethylene terephthalate

For historical perspectives Table 4 shows the shift in carpet face fiber from 2008-2012. It should be noted the rapid rise in PET face fiber represents a significant challenge to recycle of post-consumer carpet since there are currently no high volume viable outlets for PET face fiber.
Table 4: Post-Consumer Carpet Fiber Type, 2008-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>N66</th>
<th>N6</th>
<th>PP</th>
<th>PET</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>36%</td>
<td>44%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>2009</td>
<td>27%</td>
<td>49%</td>
<td>11%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>2010</td>
<td>35%</td>
<td>36%</td>
<td>12%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>2011</td>
<td>32%</td>
<td>35%</td>
<td>10%</td>
<td>19%</td>
<td>4%</td>
</tr>
<tr>
<td>2012</td>
<td>34%</td>
<td>25%</td>
<td>11%</td>
<td>24%</td>
<td>6%</td>
</tr>
</tbody>
</table>

The same face fiber information is presented graphically in Figure 8 to emphasize the temporal shifts over the past five years.

Figure 8: Post-Consumer Carpet Fiber Type Trends, 2008-2012

CARE Carpet Recycling Survey Respondents Employed an estimated 1,318 People in Local Communities across the U.S. in 2012

The 39 respondents to the CARE Annual Survey employed 1,318 people in local communities in 2012, a decrease of 144 people or 9.9% versus 2011.
Figure 9: CARE Annual Survey Respondents’ Employment by Geographic Region

Collection of Carpet is Highest in Southeast, Midwest, and California

Respondents were asked to report the volume of carpet collected by region. See Figure 10 for the U.S. regional map.

Figure 10: Reporting Regions in the U.S.

Examining the amount of carpet collected by region, it is noted that carpet collection is highest in the Southeast, followed by Southwest and California. Opportunities exist to increase carpet recycling in other areas in the US, such as the Northwest.
Qualitative Feedback from Carpet Recovery

In addition to the quantitative data gathered during the survey, respondents were asked what specific activities CARE had undertaken to assist the carpet recycling industry. A summary of the results follows:

We also asked respondents what business opportunities they felt needed additional CARE support.
In 2012, respondents to the CARE Annual Survey diverted 351 million pounds from the landfill and recycled 294 million pounds of that carpet.

Reported diversion and recycling rates were 10% percent and 8% percent of discards, respectively, in 2012.

Since its inception in 2002, CARE members have recycled over 2.7 billion pounds of post-consumer carpet in United States.

There are two factors that resulted in a relatively high quality of data reported in 2012. First, the response rate was again very high, with 39 companies providing some level of quantitative data. No extrapolation of data or use of secondary sources was required. Second, through extensive follow-up effort beyond the survey, access was provided to information that allowed for a highly specific determination of double counting when it did occur and an accurate adjustment that we believe minimizes any potentially significant sources of double counting. California AB 2398 data was also used to cross-check national reporting. However, we are aware there are collectors who do NOT provide feedback to CARE and thus their numbers are not included in this analysis.

There is a great deal of diversity in the types of companies reporting post-consumer carpet recycling. This diversity includes geographic, process technology, size (very large corporations vs. small, entrepreneurial entities and end-use markets), business model, etc. As has been true in the past, the largest fraction of recycling is attributed to companies that perform more than a single recycling function: collection, sorting, processing and manufacturing.
• Manufacturers indicated that 63% of the post-consumer carpet was recycled into engineered resins. 27% of the post-consumer carpet went into new carpet, as either carpet face fiber (15%) or carpet backing (12%). It should be noted this is a dramatic increase vs. essentially zero in 2002. The ability to “close loop recycle” post-consumer back into carpet required major technology development. It is important to recognize spinning fiber from PCC is the most demanding outlet in terms of quality feedstock.

• Approximately 88% of the material reported to be recycled was sent to facilities in the U.S.

• The data shows a focus on the collection and sorting of nylon face fibers. In 2012, N6 and N6,6 fibers accounted for 59% of the total carpet fiber recycled. The percentage breakdown between the two fiber types was similar, with Nylon 6 accounting for 34% of the total and Nylon 6,6 accounting for 25% of the total. Polypropylene fiber was 11% of the total and PET was 24% and growing rapidly.

• PET face fiber has seen dramatic growth over the last several years from less than 8% in 2006 to 24% in 2012.

• Respondents to the CARE Survey employed 1,318 people in local communities in 2012. The vast majority are located in either the southeast or California. CARE is extremely proud of the impact this employment has on local communities across the United States.

Survey Methodology

In developing a survey methodology to establish quantitative estimates of recycling of a particular waste stream, two key factors must be taken into account: 1) participation; and 2) double-counting. Participation is essential in any surveying process, and even more so in this type of survey, where there is no logical or reliable way to extrapolate results from respondents to the general population. This means that respondents’ survey responses will represent the complete and total results. Thus, every effort must be made to maximize participation.

However, with increasing participation comes another potential problem: double-counting. Since a given pound of used carpet may pass through several different entities on its way from the point of generation to its ultimate disposition (reuse, recycling or disposal), and, since all of these different types of entities (collectors, sorting facilities, processors and manufacturers) are included in the survey, the chance exists that the same pound of carpet could be counted more than once. As participation increases, the likelihood of double-counting increases, since there is a greater chance that more than one company may be reporting on their handling of the same material.

A number of features were built into the surveying process to address these two key issues:

Confidentiality of data is often the key to participation, and all aspects of the survey were designed to preserve confidentiality. In particular, a web-based surveying tool was used to allow respondents to provide data completely anonymously, if they desired. In addition, all written and verbal communication with potential survey respondents stressed the confidentiality of data.

Simplicity and ease of response was also a key to participation rates. The survey questions were streamlined to the maximum extent possible so that only the most critical data requirements were included, based upon the philosophy that it is much better to have the basic data from many respondents than detailed information from a few (particularly since there is no basis for extrapolation).
Participation rates can also be boosted through the use of multiple means of contact (as well as repeated contacts). Thus, e-mail, telephone and face-to-face communication were all used to contact potential survey respondents. Every effort was made to include new players as they became known to CARE.

To maximize the value of those survey responses received, and to minimize chances of double counting, it was determined that it would be best to focus resources on all recipients who received an invitation to participate in the survey. All types and sizes of companies involved in carpet recycling were contacted initially with a request to respond to the survey; resources for telephone follow-up were prioritized and assigned follow-up targets.

To reduce the chances of double counting, survey respondents were asked to identify the geographic sources of their material to the extent they were known. The notion behind this is that if the nature of the survey responses is such that there is a sense that information from two or more companies might reflect handling of the same material, the geographic sources of these companies could be reviewed to determine if that was likely.

In another attempt to reduce the chances for double-counting, survey respondents were asked about the type of companies that received the material their company shipped out after they finished handling it. This information not only allows for identification of possible double counting, but also serves to provide a more complete picture of the overall flow of used carpet through the collection and recycling process.

With those basic principles in mind, the surveying process was implemented, using the steps outlined below, which are described in general chronological order:

1. The survey form used in the 2012 survey was slightly updated based on respondents’ feedback. The 2012 survey form is shown in Appendix 1 to this Report.

2. Once again, the survey form was web-based and posted on the Internet. The survey was accessed by going to a specific URL address that housed the survey, and results were submitted via the Internet, without the need for e-mail or paper-based responses. The results were password protected and available solely to two CARE staff, to preserve confidentiality.

3. Based upon past experience with this survey process, the surveying was focused solely on those companies for which specific individuals have been identified as points of contact.

4. Companies with specific contacts and e-mail addresses were notified via e-mail about the survey and provided the URL so that they could respond electronically. A total of about 400 different companies were sent e-mail notifications of the survey (more than one individual was contacted from an individual firm in several instances). The e-mail notification stressed the confidentiality of the information they were asked to provide.

5. Approximately two weeks after the initial e-mail was sent, follow-up activities were initiated. These included follow-up e-mails to those companies that had not responded, as well as telephone calls to prompt responses and answer questions some potential respondents had raised.
6. All survey responses were reviewed for any internal inconsistencies or unclear responses. The survey responses were also reviewed to determine if there were any questionable responses (e.g. data that appeared to be off by orders of magnitude with regards to company size). In those instances where there was some question about the responses provided and the respondents had provided their names (respondents can choose to respond entirely anonymously), follow-up was performed to clarify the responses.

7. Data from survey responses were transferred to a spreadsheet-based database. This database contains all of the quantitative responses, as well as summaries of any descriptive information provided by the companies.

8. Data to eliminate potential double counting was received and appropriate adjustments made to the data compilations where/when necessary.

9. The data in the database were compiled and analyzed to produce the results described herein.

10. Efforts to maintain consistency year to year are considered important to plot trends and look for patterns.

**Assessment of Survey Approach and Results**

As noted previously, there are two key factors that led to the conclusion that this year’s survey results are high in quality (i.e. believed to be more representative of real-world conditions):

1. Response rate was again very high, meaning that a greater proportion of the total number of companies involved in post-consumer carpet recycling responded by submitting survey results.

2. A significant portion of the carpet recycled was handled by manufacturers who reuse the material internally within their own manufacturing process, thus eliminating the possibility for double counting of this material.

For these reasons, double counting does not appear to be a significant issue with the data presented herein. However, it should be noted a correction was applied in 2012.

**CARE Outreach Results, 2012**

**10th Annual CARE Conference**

In 2012, 117 members and colleagues of CARE gathered at its 10th Annual Conference at Loews Coronado Bay resort in Coronado, California. For two-and-a-half days, attendees networked with professional colleagues, to learn more about new products and technologies that can help them in their businesses.

CARE also recognized the outstanding individuals and companies who made significant contributions to the CARE organization. The following awards were given:
2011 Recycler of the Year-The Carpet Recyclers

The California-based firm The Carpet Recyclers was named as CARE’s Recycler of the Year for 2011. The outgrowth of a parent firm with twenty-plus years of experience in recycling, The Carpet Recyclers began by collecting carpet face fiber and then expanding in 2010 to include processing and recycling of the entire carpet - backing, filler, etc. To date, the company has created more than 100 green jobs and achieved a 90 percent processing rate. The company’s stated goal is to become zero-waste by 2013. The Carpet Recyclers projects it will process more than 70 million pounds of used carpet during the first year of operations in the company's state-of-the-art facility in La Mirada, California, thereby saving more than 7 million gallons of oil, according to company estimates.

2011 CARE Person of the Year

The CARE Board of Directors named fellow board member Larry Cook. Mr. Cook, who was Director of Manufacturing Initiatives and a plant manager with Beaulieu Group, has been active in CARE since 2010. In addition to his board duties, Mr. Cook also serves as Chairman of the CARE’s Stewardship Plan Committee. He was heavily involved in planning for the carpet industry’s implementation of California’s groundbreaking AB 2398 carpet recycling legislation.

9th Annual Entrepreneur Meeting, Atlanta, Georgia

Eighty-six CARE entrepreneurs and members gathered in the fall of 2012, to discuss common opportunities and challenges facing them and the growing carpet recycling industry. The meeting agenda and copies of the presentations may be found at carpetrecovery.org.

CARE wishes to acknowledge the sponsors of the 9th Annual Entrepreneur Meeting: Interface FLOR Commercial, , Shaw Industries Group, Inc., Aquafil, Universal Fibers and Tandus Flooring Inc. Without their generous and continued support this meeting would not be possible.

CARE Website Traffic

CARE’s website, carpetrecovery.org, is the leader in internet search engine’s results for keywords related to carpet recycling. In fact, CARE’s website returns at the top of Yahoo and Google when an internet search is conducted on “carpet recycling.” Despite a decrease in web traffic in 2010, CARE saw an increase in web traffic in 2011 and again in 2012.

CARE’s website traffic for 2012 was 313,928 versus 198,452visits in 2011, a 58% increase versus 2011. With CARE being the stewardship organization for AB 2398, many consumers used the website to gain information about the program. In addition, the continued increase in economic conditions for 2012 likely also contributed to an increase in visits.

CARE has plans to build a new website in 2013 and your thoughts would be welcome.
The following figures provide an overview of our website activity for 2012.

**Figure 14: About CARE Webpage Hits, 2012**

![Bar chart showing visits to the About CARE webpage from January to December 2012.](image)

**Figure 15: Hits on CARE’s Map Webpage, 2012**

![Bar chart showing visits to the Map webpage from January to December 2012.](image)

**Figure 16: Hits on CARE’s AB 2398 Webpage, 2012**

![Bar chart showing visits to the AB 2398 webpage from January to December 2012.](image)
Carpet Industry Initiatives

Aquafil, USA

The core business of the Aquafil Group is the production of nylon 6 polymer that we spin into fibers and then work into ready to tuft yarn for carpets. We are headquartered in northern Italy and employ nearly 2,000 people, with operations on three continents. The North American operation, Aquafil USA, is a BCF factory in Cartersville, Georgia.

The Aquafil mission is to generate sustainable closed loop nylon 6 products from waste. Since 2011, we are operating a nylon 6 recycling plant in Ljubljana, Slovenia. This innovative recycling plant, called the ECONYL® Regeneration System is based on the sustainable chemistry of depolymerization. We take the nylon 6 contained in pre and post-consumer wastes such as old carpets, clothing and fishing nets and regenerate it back into virgin raw material - without any loss of quality. Closing the carpet to carpet face fiber loop, from waste materials, preserves precious resources like water, air, fuel and energy.

The Aquafil Group continues to reduce our environmental footprint with continuous investing to reduce per pound energy, water and emissions results. We continue to recycle everything possible associated with our manufacturing operations.

Aquafil USA is actively implementing energy efficiency projects. In 2011 we reduced our energy consumption by implementing reduced energy lighting and Reactive Power Correction technology across the factory. In 2012 we made a significant investment and commissioned a 400 Kw photovoltaic array for green power generation from our roof. This is the largest rooftop solar installation in Georgia. Aquafil USA is a “waste negative” company as we take in and consume more reclaimed polymer than unsorted waste discharged from our operations.

The aim is to reduce our overall business impact by continuously reducing energy consumption in our production and increasing recycled and reclaimed raw material sources for our products. This allows our customers to better champion product stewardship. For the carpet industry this means designing products with the end of life in mind by using nylon 6 face fiber while minimizing other polymers in carpet construction going forward.

ECONYL® is our branded recycle based nylon 6 BCF yarn system. In 2012 Aquafil USA received certification by UL Environment for Alto Chroma ECONYL® solution dyed fibers made from 100% recycled polyamide 6 polymer. It has the same high quality technical performance and full brilliant color possibilities; Aquafil is well known for, in an infinite closed loop cycle.

To learn more about ECONYL® please see our dedicated web site: http://www.econyl.com/.

ECONYL® products add significant value to LEED and NSF-140 certifications.

Interface

Interface has reclaimed more than 230 million pounds of carpet since 1994 when we began measuring our collection. Our recycling business, called ReEntry 2.0, reclaims all types of carpet (commercial and residential) regardless of face
fiber type or backing used. The Interface technology allows the materials in old carpets to be cleanly separated to ease the recycling process.

Separated nylon fiber is recycled into new nylon fiber and plastics (both 6 and 6,6), while separated vinyl backing is recycled into new vinyl backing using Interface’s Cool Blue backing technology, all with a remarkably low energy footprint. Recycling partners have been identified for other reclaimed carpet materials to ensure that no reclaimed carpet ends up in landfills.

Through ReEntry 2.0 and our fiber extrusion partners, Interface has introduced more than 100 post consumer fiber colors in solution dyed nylon. The system has a number of unique qualities, including extremely small physical and energy footprints and its flexibility. Through ReEntry 2.0, Interface is now able to reclaim all types of carpet, reducing waste sent to landfills and further reducing the company’s reliance on virgin materials.

Interface can process more than 30 million pounds of carpet annually through this system in Georgia, and has begun to execute a regionalization plan. Knowing the importance of regional collection and processing, we are partnering with businesses around North America to help the industry grow and help secure the necessary post-consumer raw materials to close the loop in our supply chain and de-couple ourselves from petroleum.

J+J/Invision

As CARE members know by now, J&J Industries considers conservation at the core of sustainability. Preventing excessive or inefficient use of natural resources along with the preservation of the environment are foundations to J&J’s environmental stewardship. Our Stewardship Focus also embraces our landfill diversion initiatives which include CARE’s goals. And as a founding member and Sustainable Leader at CARE, we take pride in each of J&J Industries’ recycling and reclamation actions.

We’re proud that in 2012, we offered to the market place our first Sustainable Progress Report. We’re pleased with this transparent report and encourage all who are interested to read it for themselves. It can be found here: http://www.jj-invision.com/pages/sustainability-report

Know that reducing our impact on the environment has been, and will continue to be, a priority for J&J. In 1997, we created EnAct® (environmental actions) to serve as the umbrella for our continuously evolving environmental initiatives, many of which extend far beyond the mill. EnAct embodies our organization-wide focus on reducing, reusing, recycling, and creating a healthier, more sustainable environment, and allows us to more consistently express our environmental commitments.

One of the initiatives of EnAct® is our Carpet Reclamation program. The J&J Industries’ Carpet Reclamation Program facilitates the reclamation of used carpet and guarantees that it will not reach a landfill. This program is available to all customers, regardless of whether or not they purchase or specify J&J Industries’ products. Since the program began in 2008, we have diverted over 5.1MM pounds of carpet from landfill.

In 2007, we developed a new EnAct® initiative we call R4® - Reduce, Reuse, Recycle, and Return. The R4® program was developed specifically for our customers and allows the ability to easily recycle all J+J/Invision carpet samples and architect folders. To date, using this simple samples return program, we’ve helped prevent over 80,000 pounds of sample waste from the country’s landfills.

Following the principles of Sustainability, we’re proud that we commissioned a first-of-its-kind process in the industry
called the J&J Aquafinity® Water Reclamation Project. This innovative, closed-loop, filtration process recovers waste water from the dye house, purifies it using a blend of filters and reverse osmosis that remove dye and chemical additives and returns purified reusable water to the dye house. Aquafinity allows J&J to recover 60 to 70% of dyehouse wastewater – the most water-intensive process in carpet manufacturing. That percentage is equal to recycling the contents of an Olympic-sized swimming pool each week!

Since 1957, J&J Industries has shared its strong core values and high ethical standards through countless volunteer efforts, community involvement and positive environmental actions. We’re committed to engaging and empowering our associates and customers to take environmental responsibility. As a smaller, highly integrated, privately-owned manufacturer, J&J Industries has the flexibility to easily monitor and modify our footprint while pursuing innovative sustainable practices. As a company we believe that products should be evaluated holistically using a multi-attribute approach, rather than focusing on single product attributes or certifications. With conservation as the core of our sustainability initiatives, we’ve developed aggressive goals on energy and emissions reduction, water conservation, and waste minimization.

Mannington

Mannington has long driven investment and research into reducing manufacturing waste and increasing efficiency. By evaluating our products and processes against our corporate goal of becoming a net-user-of-waste, we have been able to make significant company-wide improvements to allow us to attain that goal at multiple locations. Also, by implementing robust environmental management systems registered to ISO 14001 at both our Georgia carpet operation and other company locations, we have proven that our entire process exceeds these stringent environmental standards.

An initial carpet product that enables us to meet these environmental hurdles was Artcraft carpet tile which has been a great success both for its colorful aesthetics and smart re-use of 100% post-production yarn. The next improvement was Artworks, which added a dominant high recycled yarn to the Artcraft look, and is available with our Infinity RE recycle backing. In 2011 we announced yet another upgrade to this innovative line with the Renaissance tile which accentuates this post-production yarn product with an innovative over-dyeing technique.

All other commercial carpet tile products are available for use with the Infinity RE backing system, which contains both pre and post-consumer recycled content and routinely exceeds a total of 30% by total product weight. The minimum amount of post-consumer recycled content exceeds 10% and most of this is reclaimed post-use carpet through LOOP, our nation-wide carpet reclamation system. We have also significantly increased our carpet reclamation activities through LOOP over the past several years, showing we are certainly heading in the right direction. For example, the most current three years of 2010 - 2012 exceeded the reclamation totals of the 2007 & 2009 by over 48%. All Infinity RE backed carpet meets the Platinum level of NSF/ANSI-140 - Sustainability Assessment for Carpet. Additionally our UltraBac RE and Integra HP RE broadloom carpets are Platinum rated to NSF/ANSI-140, as well as rEvolve modular tile.

Regarding our recycling expertise and the technical framework of carpet-to-resilient and resilient-to-carpet, Mannington continues to be the only company able to reuse reclaimed carpet into Relay RE. It is the first and only hard-surface flooring to contain recycled carpet. Relay RE is 35% total RC – 20% post-consumer and 15% pre-consumer content – all from carpet. Mannington will continue to invest and research new technologies and processes to increase recycled content and reduce waste. We will continue to work with progressive organizations like CARE who are working to improve environmental performance in our industry, because after all, actions speak.
At Milliken, sustainability is core to our culture. We believe that a healthy enterprise and healthy earth are vitally linked. We care about and respect each other, our customers and the world we share. While we hold ourselves accountable to the highest ethical standards, we derive our greatest satisfaction from creating innovations that help solve the world’s problems at a human level – adding value to people’s lives, improving health and safety, and making this world sustainable.

Milliken has been a leader in such initiatives for more than a century, issuing environmental policies long before the word “green” became popular. The award-winning company is carbon negative, thanks to the sustainable management of more than 130,000 acres of trees in Milliken forests, the use of renewable resources and its energy management system. Additionally, all Milliken products are certified carbon neutral, from textiles to chemical products.

We are continually developing sustainability drivers. Most recently, new activities include the introduction of a Landfill Diversion Program, as well as implementing Lifecycle Analysis and Environmental Product Declaration verifications to all tile products.

**Carpet Landfill Diversion Program**
The Landfill Diversion Program provides simple means for customers to divert old carpet from landfills. Milliken makes it easy to begin the diversion process – finding the highest form of recovery, including recycling it into new carpet, downcycling into alternative products or donating it to charity.

**Lifecycle Analysis/Environmental Product Declaration**
To access the environmental aspects and potential impacts associated with a product, process or service, Milliken is proud to announce all tile products will have a third-party verified life cycle analysis (LCA) and environmental product declarations (EPD) by the spring of 2013.

The efforts allow our team – as well as our customers – to make more informed decisions through a better understanding of the impacts our activities have on the environment. Additionally, all tile products with EPDs will qualify for additional points that can be used towards the updated LEED version 4.

Milliken also stands by its five pillars of sustainability – to support initiatives that hold our organization accountable to the global community for the impact we have on the Earth. The five pillars are: Products, End of Life, Operations, Environmental Health and Safety, and Transparency.

**Products**
Milliken is dedicated to designing innovative products and solutions for our customers that minimize environmental impact. Milliken strives to increase the durability, longevity and sustainability results on all products from the merging of meaningful design, deep science and unique insights.

Milliken designs:
- Products with the maximum amount of recycled content
- Products and services that maximize their useful life
- Products that are easily recycled at the end of their useful life

Additionally, Milliken is utilizing the world’s first and only 100% recycled polymer in our Solution Dyed Nylon collections.
End of Life

End of Life Promise: Milliken takes responsibility for the end of life of our products and for any competitors’ products we replace. We work with our strategic partners to divert old carpet from landfills and into the most appropriate application, while reducing the impact on our Earth.

To support our “No Carpet to Landfill” Pledge, which we established in 2002, we evaluate the condition of used carpet being replaced by Milliken and choose the highest form of recovery possible.

Milliken became a founding member of the Carpet American Recovery Effort in 2002 – and has an active board member on CARE.

Operations

Milliken manufactures products via methods that are beyond compliance to regulation by continual reduction of the environmental impact of our operations.

We continue to strive to:

- Reduce our carbon footprint
- Reduce our consumption of non-renewable resources
- Send zero waste to landfill
- Reduce our manufacturing environmental footprint by 25% by 2013

With our global environment management team in its fourth decade, Milliken is focused on reducing our total impact. As a 2011 recipient of the Made in the USA Foundation’s “Hall of Fame Award,” we are continually committed to USA manufacturing.

Environmental Health and Safety

The safety and well-being of the associates in our workforce is paramount. We exceed expectations in compliance around the globe by setting benchmarks for efficiency and safety. All of our associates are engaged in safety and resource management initiatives, as well as career development. We will not expose our associates or our customers to hazardous materials in our manufacturing processes, products or services. Milliken continues to define and eliminate all potentially hazardous materials from our products and our operations, throughout the life of products and services we provide.

In 2012, Milliken was recognized – for the sixth consecutive year – by Ethisphere Magazine as one of the “World’s Most Ethical Companies.”

Transparency

Milliken’s operations and products remain transparent through industry-respected third party certifications. Our customers know who we are and trust what we do, evidenced by the highest achievement of environmental, quality and safety standards.

- Milliken is certified as a carbon neutral manufacturer without purchased carbon credits for the seventh consecutive year, based on quantified emissions that include energy reduction, renewable energy and carbon sequestration delivered by its forests.
- In 2011, Milliken won the Sunoco Sustainability Star Award, Gold Level.
Mohawk

Mohawk’s industry-leading sustainability programs include a focus on transforming waste streams to value streams, implementing renewable technologies, reducing our impact on the planet, and a legacy of social responsibility. With sustainability as part of our core values, Mohawk is proud to be a founding member of CARE.

Sustainability is a strategic business imperative that permeates all aspects of Mohawk’s operations. We are dedicated to providing our customers and consumers with safe and environmentally friendly flooring products. We continue to implement sustainable business initiatives that have a quantifiable return, as we believe such initiatives offer the best opportunity to yield a significant impact and create a lasting success.

Our strategy focuses on maximizing the amount of recycled or renewable content in all products. We are committed to developing processes that make it easier for end users to recycle products that are at the end of their useful application.

As an example of our commitment to sustainability, Mohawk ranks among the world’s largest recyclers of plastic bottles, creating EverStrand™ fiber from approximately 20% of all post-consumer bottles in North America (more than 3 billion bottles each year) and diverting millions of pounds of PET plastic from the nation’s landfills.

Mohawk’s GreenWorks Center also reflects that commitment. This leading-edge facility applies a unique, patent-pending process to extract nylon 6 and 6.6; polypropylene, polyester, and Triexta post-consumer carpet face fiber for use in engineered resin. In addition, the plastics recovered through GreenWorks are excellent substitutes for virgin material and are used in many high-value products in a multitude of industries.

Mohawk launched the ReCover program which facilitates the collection and logistics of the old carpet, regardless of manufacturer, in efforts to prevent it from reaching a landfill. The carpet is converted into post-consumer fiber bales and turned into engineered Nylon 6 and Nylon 6,6 resin pellets to be used in the production of auto parts.

We perpetually seek new ways to translate our commitments into action. For instance, we are increasing our recycling and re-use initiatives to further reduce our total waste to landfill intensity by 25 percent by 2020 when compared to the 2009 baseline and are on track to reach this goal.

Mohawk is recognized as the first flooring company in the industry to appoint a Chief Sustainability Officer, along with a Sustainability Council comprised of key Mohawk Executives and a diverse team made up of personnel from multiple organizations within Mohawk.

At Mohawk, we take pride in a tradition rich in sustainable innovation, and we look forward to building on those programs in the future.

Other sustainability highlights for Mohawk Industries that coordinate with CARE efforts include:

- Mohawk’s SmartStrand® carpet is made from DuPont™ Sorona®, which 37% comes from a renewable resource. DuPont™ Sorona® requires 30% less energy and emits 63% less CO2 in the manufacturing process, while improving performance capabilities, including stain resistance.
- First in the flooring industry to eliminate phthalates from products
- Mohawk’s NXT backing is a PVC-free, high performance option
- Two facilities in Georgia achieved zero manufacturing waste
In addition, Mohawk has been recognized in the following:

- 2012 – Mohawk ranked in Top 3 Georgia companies, and leads the flooring industry in Southeastern Corporate Sustainability Rankings
- 2012 – Top 500 in Newsweek Green Ranking for the third consecutive year. Mohawk continues to be the only flooring company to make the list. Mohawk is ranked 314.

Shaw Industries Group, Inc.

Shaw Industries has long been committed to Sustainability through Innovation™ – the Shaw Green Edge®. An industry leader in environmental and social responsibility, Shaw is committed to investing in the continuous improvement of products and processes designed to create a better future for people – and for our planet.

As the world’s largest reclamer of post-consumer carpet, Shaw diverts more than 100 million pounds of carpet each year on average. Approximately 80% of the carpet Shaw reclaims is recycled back into new carpet.

Highlights of Shaw’s sustainability efforts in 2012 include:

- Reaching a critical milestone in the company’s post-consumer recycling efforts by reclaiming more than 600 million pounds of post-consumer carpet from landfill since 2006 – including more than 500 million pounds of post-consumer Nylon 6 carpet for recycling at our Evergreen Nylon Recycling facility
- Reclaiming more than 100 million pounds of post-consumer carpet in 2012 alone
- Actively continuing to expand the company’s reclamation and recycling network – as well as working directly with large commercial customers to help reclaim their post-consumer carpet after its useful life
- Reclaiming energy from post-consumer carpet otherwise destined for landfill through our Re2E (Reclaim to Energy) facility, the world’s first energy generation facility powered specifically by carpet that cannot be recycled by any other means
- Helping reduce landfill waste beyond our own industry by recycling an average of 160 million pounds of plastic drink bottles annually at the company’s Clear Path Recycling facility, a joint-venture with DAK Americas
- Fiber made using recycled PET from Clear Path is used in Shaw’s ClearTouch® residential carpet products

For more information about Shaw’s sustainability commitment, visit http://sustainability.shawgreenedge.com.

Tandus Flooring

For nearly half a century, Tandus Flooring has been a pioneer in the areas of research and development of innovative solutions while continually advancing business practices to meet the critical environmental challenges facing our industry. Consistent with this heritage of innovation, Tandus Flooring established the INFINITY INITIATIVE.

The Infinity Initiative encourages the forward thinking and risk taking that leads to the breakthrough technology that will fix the environmental problems of today and serve as the springboard to answer the challenges of tomorrow. The collective energy within the Tandus Flooring community has led the progression of historic milestones in environmental and social responsibility and sets the stage for future successes.

Tandus Flooring has recycled more than 225 million pounds of flooring and waste through the industry’s first closed loop recycling program since it was launched in 1994. The Infinity Initiative has led to absolute transparency to environmental claims with the world’s first third party certified flooring reclamation center and third party certified recycled products. These tangible advancements provide an infinite opportunity to improve environmental stewardship and socially responsible initiatives in a collaborative environment.
Initiatives toward product solutions include a clear responsibility towards landfill avoidance with continuous increases in post-consumer content in our products while decreasing our carbon footprint. We challenge the industry and ourselves to simplify the recycling process, continue to practice source reduction and provide product solutions with the lowest embodied energy and the highest proven performance. A longer perspective is to ensure that we continue to engage communities, insure accountability and an unwavering dedication to enhance spaces for learning, working healing and living.

There is an infinite capacity to improve everything exponentially through responsible leadership. Leadership does not begin and end with simply recycling more. It’s about investing in new ideas and implementing new practices that lead to change, helping to improve the human condition. Tandus Flooring’s Infinity Initiative continues beyond the next innovation; the process is infinite.

**Universal Fiber**

Each year has a unique story to tell – and 2012 is no different. The background is all about adding technology that enables non-virgin content to be increased within the framework to which CARE itself holds – market driven.

We’re happy to report solid progress on quantity – both in each pound of fiber AND in pounds of fiber. That starts with a solid supply chain. In 2012, we’ve been diligent around expansion – although admittedly we haven’t shrunk the distance between the East and West Coasts.

More significantly, Universal strengthened its commitment to technology development. It’s naive to think that “ready to use” feedstock will be delivered to our doorstep when easier to satisfy customers exist in engineered plastics compounds. From this strengthened commitment, results are neither complete nor ready for airtime – but are highly encouraging and promising.

In summary, we’re pleased with gains made with PC carpet feedstock use, but not satisfied. Expect more and better from 2013.
Appendix 1
Carpet America Recover Effort (CARE) Survey 2012

Dear CARE Carpet Reclamation and Recycling Partner,

Thank you for taking the time to complete the 2012 Carpet America Recovery Effort (CARE) Annual Survey. Your complete answers to this survey will allow us perform quantitative analysis on the carpet recycling stream and create a detailed Annual Report for the stakeholders of CARE.

Please report only the quantity of postconsumer carpet managed through your business. For purposes of the CARE Annual Report, we will NOT include information on postindustrial carpet, ONLY POSTCONSUMER CARPET.

The survey is 24 questions long and should take less than 15 minutes to complete. To minimize the amount of time spent on completing the survey, we recommend that you read through the survey and have your data available before completing the survey. If you need any assistance or have questions while completing this survey, please contact Anthony Cline, CARE's Operations Manager, at acline@carpetrecovery.org or 706-428-2127.

Due to the time sensitive nature of this survey, please complete survey by close of business on Friday, March 1, 2013.

Note All- Company information and answers to this survey will be CONFIDENTIAL, and will only be seen and used by CARE’s Executive Director and Operations Manager.

All data collected will be reported in the aggregate, thus removing any references to individual companies.

Thank you,

Bob Peoples
Executive Director, Carpet America Recovery Effort (CARE)

1. Of your total employees how many are associated with the diversion/recycling of post-consumer carpet?

2. Please select the type of company form the list below, based upon the descriptions provided. If your company performs more than one function, check all boxes that apply.

- **Collector** – A company that consolidates and temporarily stores recovered commercial and/or residential carpet.

- **Sorting Facility** – A facility that segregates collected carpet into the various backing types (PVC, SBR Latex, etc.) and/or fiber types (e.g., Nylon 6, Nylon 6.6, Polypropylene and Polyester).

- **Processor** – A company or facility that receives post-consumer carpeting (whether handled by a sorting facility or brought directly by a collector) and processes it for use as a feedstock in a manufacturing facility.

- **Manufacturer** – A company or facility that utilizes processed carpeting materials and transforms them into other products, or uses them as raw materials in a manufacturing process.
To assist you in answering the next series of questions, please see the attached flow chart, definitions and example

Carpet as Alternative Fuel (CAAF): Fuel that has been produced from source-separated carpet and processed, including (1) extraction of components if at all possible; (2) size reduction, shredding, and/or blending with coal fines, etc.

Cement Kiln: Cement production facility that may use CAAFs as a source of energy and/or as additives for cement production.

Incineration: Complete burning of material to ashes, with no energy recovery.

Landfilling: Landfilling includes the placement of post-consumer carpet and/or the residuals from a post-consumer carpet management method into a landfill disposal facility.

Reuse: Refurbishing and donating/selling recovered carpet back into the market for its original intended use. The reuse of recovered carpet retains the original purpose and performance characteristics of the carpet.

Waste-to-Energy: Process of recovering thermal energy from MSW through combustion.
Example: A recycling business person collects 1 million lbs of carpet. The recycler sorts and shears this material and sends it to a processor. Along the way, some of the post-consumer carpet is reused, and some is not able to be recycled, for various reasons, and is either sent to a CAAF or a cement kiln facility, waste-to-energy, or the landfill. The recycler tracks the amount of material as it progresses through the process. For this example, the recycler would answer the next questions as follows:

Collected 1 Million lbs of post-consumer carpet, of which:
- 900,000 lbs sent to sorting facility
- 50,000 lbs sent to waste-to-energy
- 10,000 lbs were reused
- 40,000 lbs went to landfill

900,000 lbs of post-consumer carpet was available for sorting:
- 700,000 lbs went to the processor
- 100,000 lbs were reused
- 0 lbs went to CAAF or cement kiln
- 50,000 lbs went to waste-to-energy
- 50,000 lbs went to the landfill

700,000 lbs of post-consumer carpet was available for Processing:
- Produced 210,000 lbs of sheared material
- 100,000 lbs went to CAAF or cement kiln
- 100,000 lbs went to waste-to-energy
- 290,000 lbs went to the landfill

Using the example to help you, please answer the following questions:

3. If you are a collector please indicate how many pounds of post-consumer carpet you have collected:
_________________________________________________________________________________________________

Of the post-consumer carpet that you have collected how much of it was:
(Please ensure the total volumes equal amount collected)

Reused _______________________________________________________________________________________________
Sent to a sorting facility ______________________________________________________________________________
Sent to waste-to–energy _______________________________________________________________________________
Sent to an incinerator _________________________________________________________________________________
Sent to the landfill ___________________________________________________________________________________
4. If you are a sorting facility, please indicate how many pounds of post-consumer carpet you have: (Please ensure the total volumes equal amount sorted)

- Reused
- Sent to a processor
- Sent to CAAF facility
- Sent to cement kiln
- Sent to waste-to-energy
- Sent to an incinerator
- Sent to the landfill

For the sorting facility, indicate the percentage of postconsumer carpet that you handle by fiber type:

- Note - Total must equal 100%
- N66
- N6
- PP
- PET
- Other

5. If you are a processor please indicate how many pounds of post-consumer carpet you have received from a sorting facility: (you may have sorted the material yourself or you may have received sorted material from someone else)

- Reused
- Processed fiber shipped to manufacturer (i.e. shredded, sheared, hammer milled)
- Carpet filler manufacturing facility
- Sent to a caaf facility
- Sent to cement kiln
- Sent to waste-to-energy
- Sent to an incinerator
- Sent to the landfill

6. How are you handling the PET carpet you receive (outlets or landfill)?
7. If you are a manufacturer please indicate how many pounds of post-consumer carpet you received from a processing facility: (you may have processed the material yourself or you may have received processed material from someone else)_____________________________________________________________________________

If you are a manufacturer, please indicate how many pounds of processed post-consumer carpet material you have: (Please ensure total volumes equal amount manufactured)

Manufactured (see question 6b) __________________________________________________________________________________________
Sent to CAAF facility _______________________________________________________________________________________________________
Sent to cement kiln _________________________________________________________________________________________________________
Sent to waste-to-energy ______________________________________________________________________________________________________
Sent to incinerator _________________________________________________________________________________________________________
Sent to the landfill _________________________________________________________________________________________________________
Sent to another manufacturer/feedstream ____________________________________________________________________________________
Shipped to carpet filler manufacturing facility __________________________________________________________________________________

If you are a manufacturer, please indicate pounds of post-consumer carpet material used in the production of:
Engineered resins __________________________________________________________________________________________________________
Molded/extruded products _____________________________________________________________________________________________________
Carpet fiber ________________________________________________________________________________________________________________
Carpet backing ______________________________________________________________________________________________________________
Filler for carpet or other products ____________________________________________________________________________________________
Carpet cushion ______________________________________________________________________________________________________________
Other (please specify) _________________________________________________________________________________________________________
8. To the extent known, identify what percent of the material received came from each geographic area:

Note - Totals must equal 100%

Northeast______________________________
Southeast_____________________________
Midwest_______________________________
Southwest (excluding California)______________________________
Northwest (including Alaska and Hawaii)__________________________
California________________________________
Canada____________________________________

9. To the extent known, please indicate the percentage of the output from your facility that is sent to customers in the U.S. versus customers overseas. Answers should total to 100%.

US________________________________________
Mexico____________________________________
Canada____________________________________
Europe____________________________________
Asia_______________________________________
Other/Unknown __________________________________
10. Indicate areas where CARE has provided support that would help your business:

- CARE entrepreneur meeting
- CARE monthly entrepreneur calls
- CARE annual conference
- CARE annual report
- Presentations to local governments
- Research on separation technology
- Research on processing equipment
- Facilitate meetings with other carpet recyclers
- Additional research on regional carpet recycling levels
- End product development
- Other (please specify) _______________________________________________________

11. Indicate areas where CARE should provide support that would help your business:

- Extended Producer Responsibility (EPR) Legislation
- Presentations to local governments
- Research on separation technology
- Research on processing equipment
- Facilitate meetings with other carpet recyclers
- Additional research on regional carpet recycling levels
- End product development
- Other (please specify) _______________________________________________________

12. What are the key issues or opportunities that your business faces in the next 12 months?

13. On Dec 31, 2012, CARE completed its first 10 years under the original 2002 MOU. Overall, on a scale of 1 to 5, do you feel CARE was effective during that period of time?

- 1 - Not effective
- 2 - Slightly effective
- 3 - Adequately effective
- 4 - Very effective
- 5 - Extremely effective

14. Currently CARE does not have an MOU. Do you believe CARE is not as effective without an active MOU?

- A - Yes
- B - No
- Additional Comments _______________________________________________________

15. How can CARE assist you in addressing your highest priority issue or opportunity? ____________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
16. Overall, is CARE meeting your and your business needs?

________________________________________________________________________________________________
________________________________________________________________________________________________
________________________________________________________________________________________________

I affirm that the answers provided in this survey are accurate and complete to the best of my knowledge.

Print name ________________________________

Company and Contact Information

11. Name: ____________________________________________

Company: __________________________________________

Address: __________________________________________

Address 2: _________________________________________

City/Town: _________________________________________

State: ______________________________________________

Zip Code: __________________________________________

Country: ___________________________________________

Email address: ______________________________________

Phone number: ______________________________________
Appendix 2

Definitions Used in the CARE 10th Annual Report

**Carpet:** A manufactured article that is used in commercial or residential flooring applications as a decorative or functional feature and that is primarily constructed of a top visible surface of synthetic or natural face fibers or yarns or tufts attached to a backing system derived from synthetic or natural materials. “Carpet” includes, but is not limited to, a commercial or a residential broadloom carpet or modular carpet tiles. “Carpet” does not include a rug, pad, cushion, or underlayment used in conjunction with, or separately from, a carpet.

**Carpet as Alternative Fuel (CAAF):** Fuel that has been produced from source-separated, and sorted post-consumer carpet and processed, including (1) extraction of components for recycling if at all possible; and (2) size reduction, shredding, and/or blending with coal fines, etc.

**Carpet America Recovery Effort (CARE):** A nationwide, 501(c) (3) non-profit organization whose focus is on post-consumer carpet stewardship.

**Carpet industry:** The universe of participants involved in the production of carpet, including carpet manufacturers, fiber manufacturers, material suppliers, etc. It includes, but is not limited to, members of the Carpet and Rug Institute (CRI).

**Cement kiln:** Cement production facility that may use CAAF as a source of energy and/or as an additive for cement production.

**Collection:** Any method of consolidating and temporarily storing recovered commercial and/or residential carpet.

**Disposal diversion:** Carpet removed from the waste stream that was destined for the landfill or incineration, for the purpose of reuse, recycling, CAAF or waste-to-energy.

**Disposal facility:** Facilities that are licensed and permitted to provide final disposal for the specific wastes they accept, including waste-to-energy, incineration, and landfilling.

**Entrepreneur:** Individual or privately-held company which is not a carpet manufacturer, who actively, collects, sorts, processes or manufactures products made from post-consumer carpet.

**Filler:** Materials such as calcium carbonate, etc. used in the production of carpet backing.

**Higher value recycling material:** output of the materials with the most benefits to manufacturers of finished products. Examples of higher value recycling materials include post-consumer carpet fiber, post-consumer carpet backing, engineered resins and material for carpet cushion.

**Incineration:** Complete burning of material to ashes, with no energy recovery to reduce waste volume.

**Input:** The post-consumer carpet that is collected, sorted and readied for processing.

**Landfilling:** Landfilling includes the placement of post-consumer carpet and/or the residuals from a post-consumer carpet management method into a landfill disposal facility.
**Lower value recycling material:** Output of the materials with benefit to manufacturers of finished products, but a lower value than higher value recycling materials. Examples of lower value recycling materials include carpet filler and non-functional filler.

**Memorandum of Understanding (MOU) for Carpet Stewardship:** An agreement entered into by multi-stakeholders, including carpet industry, entrepreneurs, government entities and non-governmental organizations.

**Output:** The material that results from the processing (shredding, shearing, hammer milling) of post-consumer carpet from the processor. Examples of output are: fiber, shredded carpet tile, depolymerized chemical components, and carpet filler.

**Recycled content:** Also known as recovered material content, is the percentage of material, by weight, a product is made from that has been recovered from consumers in the municipal solid waste stream (post-consumer content) plus any industrial materials salvaged for reuse (pre-consumer/post-industrial content).

**Post-consumer recycled carpet content:** The amount or percent of carpet, by weight, that is no longer used for or has served its manufactured purpose, that is incorporated into the manufacturing process of the same or a different product.

**Post-industrial/pre-consumer recycled carpet content:** The amount or percent of carpet material, by weight, generated by manufacturers or product converters, such as trimming, overruns, and products returned to the mills, that are incorporated back into the manufacturing process of the same or a different product.

**Post-consumer carpet materials:** Carpet that has completed its life cycle as a consumer item or is no longer used for its manufactured purpose.

**Post-Industrial/Pre-Consumer Carpet Material:** Carpet materials generated in manufacturing and conversion processes, including, but not limited to manufacturing scrap and trimmings/cuttings.

**Processing:** Preparing carpet material for reuse, recycling, CAAF, WTE, or disposal.

**Recycling:** Transforming or remanufacturing discarded carpet materials into usable or marketable materials, rather than for landfill disposal, incineration, WTE, CAAF, or reuse.

**Reuse:** Refurbishing and donating/selling recovered carpet back into the market for its original intended use. The reuse of recovered carpet retains the original purpose and performance characteristics of the carpet.

**Rug:** A loose laid (not installed or attached at wall base soft floor covering manufactured from natural or synthetic fiber, including carpet cut into room or area dimensions that is not intended to cover the entire floor.

**Sorting:** The method used for segregating collected carpet into the various backing types (PVC, SBR Latex, etc.) and/or fiber types (e.g., Nylon 6, Nylon 6.6, Polypropylene and Polyester)

**Source reduction:** The result of using less product or material in manufacturing and use of carpet, and/or reducing the amount of discarded carpet generated.
**Source reparation:** The process by which carpet is separated/segregated from all other materials at the end of its useful life (or when discarded).

**Waste-to-energy:** Process of recovering thermal energy from solid waste through combustion.
CARE Board of Directors, 2012

Werner Braun – Board Chair, The Carpet and Rug Institute
Bob Lee – Beaulieu of America (replaced Larry Cook)
Russ Delozier – J&J/Invision
Sheri Gorman – RD Weis
Ron Greitzer – LA Fibers and Reliance Carpet Cushion
Thomas Holland – Texas Carpet and Construction Recycling
Lynn Preston – Tandus Flooring (replaced Glen Hussman)
Dick Kruse – Kruse Carpet Recycling
Jim Lindsey – Aquafil, Inc.
Brendan McSheehy, Jr. – Universal Fiber Systems LLC
Paul Murray – Shaw Industries Group, Inc.
Eric Nelson – Interface
Glenn Odom – Wellman Plastics Recycling
Bob Peoples – Executive Director, CARE
Sean Ragiel – CarpetCycle
Lauren Travis – Georgia Department of Natural Resources
Steve Williams – Milliken
Fred Williamson – StarNet Worldwide Commercial Flooring Partnership
Joe Yarbrough – Mohawk Group

CARE Board Advisors

Paul Ashman, Carpoetryrecycling.com
Frank Endrenyi, Assets Unlimited
Matthew Ewadinger, North Carolina Department of Environmental and Natural Resources
Dennis Hayford, Polymer Center of Excellence
Bob Pilotti, EMC Plastics
Stephen Verhoeff, Canadian Carpet Recovery Effort (Board Chair)
Joseph Hall, Canadian Carpet Recovery Effort (Executive Director)

Established in 2002, CARE is a 501(c)3 non-profit organization. Carpet America Recovery Effort (CARE) is a joint industry-government effort to increase the amount of recycling and reuse of post-consumer carpet and reduce the amount of waste carpet going to landfills.