

April 2011



SimplyGreen[®]

Straight talk on sustainability.

Paper Recycling and Recycled Content Products

Verso Paper Corp.'s Position

Verso Paper Corp. supports the use of recycled paper because we believe that recovered fiber is a valuable resource that can supplement virgin fiber. We make recycled-content products available in most of the paper grades we manufacture because they help support our customers' environmental goals. However, using increasingly higher percentages of recovered fiber to produce recycled-content paper is not always the best environmental alternative. A thorough life cycle assessment (LCA) is needed to make truly valid comparisons of the environmental benefits of recycled versus virgin fiber in any given product. Verso's own carbon LCAs found that using post-consumer recovered fiber in our products could actually result in a larger carbon footprint, leading us to the conclusion that recycled content use is not a valuable sustainability performance metric for the paper grades we manufacture. As a result, we discontinued tracking our recycled content use in 2011.

Background

Some 63.4% of all paper manufactured in the United States is recovered for recycling according to the most recent statistics released by the American Forest & Paper Association (AF&PA), and all of that paper is re-used. Most of the remaining post-consumer fiber (paper products where the end-user is a consumer) in the United States is food-contact, tissue or sanitary products that cannot be recycled or it is in rural, low-density population areas that makes recovery too costly or energy-demanding. The latter is the reason that paper recycling rates are higher in Europe than in the United States. Europe's dense population centers are much closer to each other, making paper recovery much more energy-efficient and less expensive. In the United States, the issues associated with food contact, tissue and sanitary products are unlikely to be resolved. However, the paper industry continues to look for new and innovative ways to recover more paper from rural areas in cost-effective, energy-efficient ways and otherwise increase the recovery rate, and has set a new goal to increase the U.S. paper recovery rate to 70% by 2020.

In 2009, about 39% of paper products recovered in the United States – nearly 20 million tons – was bought by manufacturers and shipped offshore. This was up from 2.1 million tons in 2000, according to AF&PA. Most of this total went to China, the world's largest importer of recovered paper. Rather than being faced with a surplus of recovered fiber, U.S. manufacturers have typically been faced with a market where sources of quality fiber for recycling are limited. However, as the global financial downturn accelerated late in 2008, demand for recovered paper declined sharply in China as well as in the United States, resulting in a market surplus. As was the case after past recessions, demand for recovered fiber is once again on the rise as the global economy rebounds, especially in China. According to RISI, the leading information provider for the global forest products industry, the world demand for recovered fiber is expected to grow 4% annually between 2011 and 2025 after a 7% increase in 2010.

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Environmental Benefits of Recycling

Contrary to popular belief, the key environmental benefit of recycling is not saving trees, which are among the few truly renewable resources on earth, but in diverting as much usable paper from landfills as possible. By diverting usable fiber from landfills, we not only extend the useful life of a valuable raw material, but also reduce greenhouse gas emissions (methane) that result when landfilled paper products degrade over time.

Many believe the best way to accomplish this goal is to mandate increasingly higher levels of post-consumer content across all grades of paper. The assumption is that if a certain amount of recycled content is good, then a higher percentage of recycled content must always be better. A number of environmental "paper calculators" have been developed to compare the environmental benefits of recycled content papers with those of paper made with virgin fiber, and these can be valuable tools. However, they do not adequately reflect the fact that as increasingly higher percentages of recycled content are used, the resulting environmental benefits diminish significantly, especially for whiter, more highly processed paper grades such as coated magazine and catalog papers. To make a valid comparison, a thorough life cycle assessment must consider the differences, especially in greenhouse gas emissions and solid waste, that result from collecting, transporting, cleaning and processing post-consumer fiber versus virgin fiber.

Greenhouse Gas Emissions

- The vehicles used to collect widely dispersed post-consumer waste and deliver it to recycling mills travel far greater distances, burn much more fossil fuel and emit more greenhouse gases than equipment used to harvest and deliver trees from working forests that are in much closer proximity to virgin paper mills.
- In a typical market where 68% or more U.S. recovered paper is shipped offshore, it becomes increasingly difficult for a U.S. coated paper mill to find very clean, high-quality recovered fiber required to manufacture products such as magazines and catalogs. In such a market, a coated paper mill that uses increasingly higher percentages of post-consumer fiber must go greater distances to find high quality recovered paper, resulting in even more fossil fuel use/greenhouse gas emissions to ship recovered fiber longer distances back to the mill.
- Even though manufacturing virgin paper requires more energy than recycled-content paper, it relies heavily on greenhouse gas neutral biofuels while most of the energy used to produce recycled-content papers comes from fossil fuels that result in higher greenhouse gas emissions.

Solid Waste

- The recycling process generates far more solid waste (from inks, fillers, degraded fiber and contaminants) than the virgin process, which uses most tree mass and recycles more than 95% of its pulping chemicals.
- Yield loss is much greater per ton of recycled paper. In a typical white paper recycling plant, as much as half of a given ton of recovered fiber may be lost in screening, cleaning, de-inking and re-pulping, and that lost fiber becomes solid waste. In the virgin process, little of the tree goes unused or becomes solid waste.
- In a healthy economy with high demand for recovered fiber, a coated paper mill that uses increasingly higher percentages of recovered post-consumer fiber will certainly have to use larger quantities of lower-quality fiber containing elevated levels of contaminants. The higher the level of contamination, the more chemical and solid waste is generated to process this fiber back to usable pulp.

Using recycled content in magazines and catalogs diverts valuable recovered fiber from uses in other paper products -- such as corrugated boxes and brown paper bags --where solid waste and energy consumption for cleaning and processing the fiber are less.

Research shows that Americans support recycling but are often uncertain about what can be recycled.

Encouraging Fiber Recovery and Recycling

Verso encourages post-consumer fiber recovery and recycling through a variety of partnerships with interested stakeholders.

ReMix – Recycling Magazines is Excellent!

Through our partnership with Time Inc. and the National Recycling Coalition, Verso helped establish *ReMix – Recycling Magazines is Excellent!* – a public education campaign to raise awareness that magazines and catalogs can be recycled with other paper products in residential recycling programs. The program exemplifies Verso's commitment to work with customers and other important stakeholders to promote environmental sustainability.



According to the U.S. Environmental Protection Agency, only 54% of the magazines produced in the United States each year are recycled. Research shows that Americans support recycling but are often uncertain about what can be recycled. *ReMix* was designed to let them know that magazines and catalogs can be recycled right along with their newspapers.

After successful campaigns in Boston, Milwaukee, Portland, Ore., and Prince George's County, Md., our most recent *ReMix* effort in New York City resulted in a 29.3% increase in magazine and catalog recycling.

Industry-sponsored Programs

In addition to leading the charge for magazine and catalog recycling through *ReMix*, Verso supports the efforts of the Direct Marketing Association (DMA) and Magazine Publishers of America (MPA) to promote recycling. The DMA's *Recycle Please* initiative encourages consumers to recycle catalogs and mixed paper. DMA member companies, which represent many of the country's leading brands, now include *Recycle Please* logos on their catalogs and direct mail pieces. The logo directs consumers to the association's Web site, www.recycleplease.org, where they can find information, helpful tips and resources on recycling.



The MPA's *Please Recycle This Magazine* public education campaign lets readers know that magazines can and should be recycled. The centerpiece of the campaign is a pair of *Please Recycle* logos that MPA members can prominently display in their magazines. The key objective of both the DMA and MPA campaigns is to increase public awareness that magazines, catalogs and direct mail can be recycled in most U.S. communities and, thereby, to increase the percentage of used magazines and catalogs that are recycled.



For more information on recycling and recycled products or other sustainability issues, please call Verso's Office of Sustainability at 901-369-4154 or visit www.versopaper.com/sustainability.