Two Sides Facts

The Myth: Print and paper is a wasteful product.

The Fact: Paper is one of the most recycled products in the world.

In addition to the sustainable advantage of being made from a renewable resource, paper is one of the most recycled products in the world. Since we began tracking how much paper gets recycled In the United States back in 1990, the recovery rate for used paper has increased dramatically. We're not only recovering more, but we now know how to get the most environmental and economic benefits from using recycled paper in new products. Two Sides members support the implementation of effective recycling schemes and the minimization and eventual elimination of print and paper waste in landfills.

All cited facts are quoted directly from the source unless otherwise noted. Where indicated, Two Sides U.S. has summarized lengthy information, but links to original sources are provided in the footnotes. Information in brackets was added by Two Sides U.S. for clarification purposes.

What are the benefits of paper recycling?

The benefits of paper recycling include: extending the supply of wood fiber; reducing greenhouse gas emissions that can contribute to climate change by avoiding methane emissions [which are released when paper decomposes in landfills or is incinerated]; contributing to carbon sequestration ; reducing the amount of energy needed to produce some paper products; and saving considerable landfill space.[1]

How much paper is generated and recovered for recycling into new products in the United States each year?

- About 81 million tons of paper waste was generated in the United States in 2010.[2]
- Used paper makes up just over 28% of all waste in the U.S. municipal solid waste stream.[3]
- In 2010, nearly 51 million tons or 63.5 percent of the paper used in the U.S. was recovered for recycling, an 89 percent increase in the recovery rate since 1990. That's about 334 pounds for every adult and child in the country. This exceeded the paper industry's 60% goal three years ahead of schedule. The industry's new

[1] US EPA website.
[2] AF&PA paperrecycles.org.
[3] U.S. EPA, 2009.

Two Sides U.S. Inc.
401 North Michigan Avenue, Suite 2200
Chicago IL 60611
T: 855-896-7433
E: pnr@twosides.info

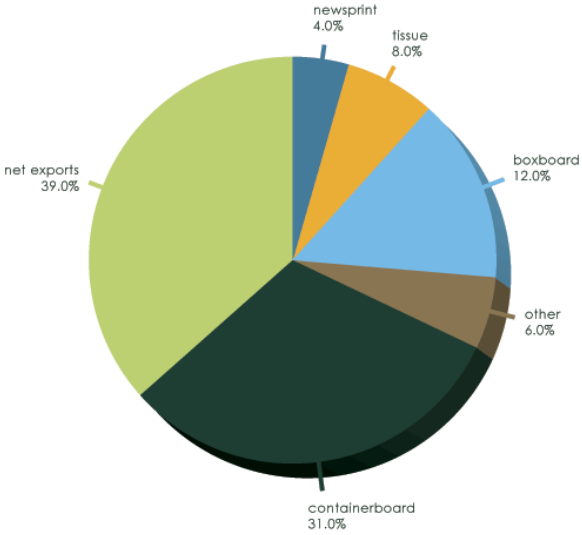
recovery goal is to exceed 70% by 2020. Every ton of paper recycled saves more than 3.3 cubic yards of landfill space.[4]

- Each percentage point of paper recovery represents roughly 800,000 tons of fiber, enough to fill more than 7,500 railroad cars.[5]

- In the United States, more paper products are recovered for recycling [from municipal waste streams] than any other material, including plastics (7.1%), glass (25.5%) and metals (7.1%).[6]

- Some 87% of Americans (268 million) have access to curbside or drop-off paper recycling programs.[7]

How is the paper that's recovered for recycling used?



- Data for 2010 indicate that 31% of the paper and paperboard recovered in the United States went to produce containerboard (the material used for corrugated boxes) and 12% went to produce boxboard, which includes folding boxes and gypsum wall board facings. Nearly 40% of the recovered paper was exported to China and other nations. The remaining 17% was used in newsprint (4%), tissue (6%) and other types of paper product (6%).[8]

- The paper recycling segment of the U.S. scrap recycling industry collects, sorts and processes recovered fiber into specification grade products that were valued at $8.9 billion in 2010. These products are sold and transported to paper mills in the United States and worldwide for production into new packaging, tissue, newsprint, office papers and a multitude of other paper products. In the United States, approximately 77% of paper mills rely on recovered fiber to make some or all of their products due in part to recovered paper's significant energy and cost savings. In addition, fiber recovered in the United States helps meet the growing overseas demand: recovered fiber was exported to 197 different countries in 2010

[4] ibid, AF&PA.
[5] ISRI, 2011.
[6] ibid, U.S. EPA.
[7] ibid, AF&PA.
[8] AF&PA paperecycles.org.

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E: pnr@twosides.info

at a value of approximately $3.3 billion, not including the tremendous environmental benefits and energy savings, while significantly helping the U.S. trade balance. [9]

Why not use only recycled paper?

- Every time paper is recycled, the fibers get shorter. After being recycled five to seven times, the fibers become too short to bond into new paper. New fibers must be added to replace the unusable fiber that washes out of the pulp during the recycling process. [10]

- *(Two Sides Summary)* The fiber cycle could not be maintained indefinitely without relying on new sources of fiber input for making paper. This is due to the technical decline that results from transforming recovered paper into a reusable fiber input. To make the global fiber supply work, a continual input of fresh fiber is needed depending on the grade of paper manufactured (from 34% for tissue to 89% for printing and writing papers.) Without this continual addition of fresh fiber, the supply of usable recycled fiber available to manufacture new products would last only a few months, depending on the grade of paper being manufactured (from 1.5 months for printing and writing papers to 17.5 months for tissue).[11]

Does using recycled content in all types of paper products make good environmental sense?

- Determining the best use of recovered and virgin fiber for any paper type— including magazine grades— requires a life cycle perspective with an evaluation of the environmental, economic and technical considerations along the entire supply chain. This includes understanding where fiber is coming from (source), how the paper is made (manufacturing) and how effectively fiber can be utilized depending on the paper type (use).

  Maximizing the use of recovered fiber—versus virgin fiber—in appropriate paper grades and under appropriate circumstances can be economically beneficial and significantly reduce environmental impacts. Maximizing recycled content for its own sake without regard to the product type, mill performance or mill location, however, may produce much more serious—if unintended—negative environmental impacts and no economic rationale. [12]

- Converting recovered paper into usable fiber requires a level of processing, the extent of which depends on the end product. Some paper and paperboard products (such as newsprint, kraft bags and corrugated

[9] ibid, ISRI.
[10] US EPA website.
[11] Metafore, 2006.
[12] Metafore, 2009.

containers) typically don't require a high degree of brightness and, because less cleaning and bleaching is required, these grades can make efficient use of recovered fiber. The brightness and cleanliness specifications for some [higher-quality] grades of paper, such as reprographic and laser print office papers, require additional processing – more cleaning and bleaching – of any recovered fiber used to produce them. As a consequence the manufacture of these products can be more energy intensive. Beyond a theoretical tipping point (probably somewhere between 30 to 50 percent post-consumer fiber content), using increasingly higher percentages of recovered fiber can result in diminished environmental returns because additional processing required could be more fossil fuel intensive and emit more greenhouse gases than avoided.

Using recycled content in coated paper grades requires significantly higher capital and operating costs based on extra steps needed for cleaning and de-inking, lower yields, and the cost to collect, sort, and transport recovered fiber. This explains why there is currently little capacity for de-inking, bleaching, and pulping of recovered fiber for use in certain grades, such as magazine paper. [13]

[13] GreenBlue, The Paper Life Cycle website.