

# Selecting Environmentally Sensitive Papers

## How to make an informed decision on your next paper purchase

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Terms like “sustainability”, “carbon footprint” and “greenhouse gas emissions” are no longer buzz words or phrases used only in environmental circles and organizations. These terms are now part of the fabric of Fortune 500 companies. Many businesses have recognized that “going green” is not only a benefit to the planet, but also a benefit to a company’s bottom line. Companies like Walmart, Toyota and others are seeing the benefits of sustainable practices in their profitability numbers. In an interview with *Grist*, Walmart’s CEO, H. Lee Scott, was asked about the company’s bottom-line motives with regard to sustainability, he replied, “As I got exposed to the opportunities we had to reduce our impact, it became even more exciting than I had originally thought: It is clearly good for our business. We are taking costs out and finding we are doing things we just do not need to do, whether it be in packaging, or energy usage, or the kind of equipment we buy for refrigeration in our stores, that there are a number of decisions we can make that are great for sustainability and great for bottom-line profit.”

The paper industry is challenged to produce environmentally sensitive paper to meet the needs of the world’s largest customers and to satisfy the demands of an expanding, and increasingly sophisticated, green market. In this white paper, we’ll explore some of the concerns of consumers and strategies the industry can use to cost-effectively address those concerns.



### Recycled Content

Recycled papers have been available in the marketplace for many years. In the early years, buying recycled often meant that a customer had to settle for a lower quality sheet — often a weaker sheet with low brightness and speckled with dirt or ink spots that were not removed in the recycling process. Modern recycled products are cleaner and brighter and perform much more reliably on press.

In its unprinted form, paper is very easily recycled. Mill-generated waste and excess trim have been reincorporated into the pulp furnish for many years — probably since the origins of the manufacturing process itself. The challenge when recycling paper is not in reusing the paper fibers themselves, but in separating them from the inks that were printed on them. Ink residue can darken the paper and result in little black spots of contamination. Because of this problem, paper made from post-consumer waste (PCW) was once directed primarily to lower quality paper products — newsprint, brown paper packaging and the secondary tissue market. However, ink removal technology has improved dramatically in the past decade, and high-

quality printing papers are now available with high percentages of PCW. Uncoated papers are now readily available with 100% PCW fiber sources and high-quality coated products are now available with 30% PCW — even higher for some applications.



### Forest Certification

Many customers believe that recycled content isn’t enough — any virgin fiber in the sheet must also be produced in an environmentally sustainable manner. There are a number of forest certification programs available in the paper industry. We have chosen to focus on the FSC certification program as it seems to be emerging as the consumer preferred option. The FSC certification program recognizes products that support economically viable, yet environmentally responsible, forestry practices.

In 1990, a group of timber users and environmental activists formed the Forest Stewardship Council (FSC) with the goal of addressing a growing need for a credible system to recognize well-managed forests. In the early stages, the organization focused primarily on defining and promoting good forest management, but in the years since, the program has developed and expanded to cover the whole supply chain for a variety of forest products, including paper.



FSC is now an international, stakeholder-owned organization that sets standards for responsible forest management and accredits independent third-party organizations to certify forest managers, pulp and paper mills and other businesses such as merchants, converters and printers who meet those standards. Once certified, businesses are allowed to incorporate FSC trademarks in their promotional materials, indicating to consumers that their products support the growth of responsible forest management worldwide.

FSC does not directly certify forests. Instead, FSC accredits a group of professional organizations, known as “certification bodies” to perform actual FSC certification audits. The certification bodies are carefully monitored to ensure that they consistently interpret FSC standards. The certification bodies can provide two types of FSC certificates. The more rigorous of the two is available only to forest managers and certifies that the forest is managed in an environmentally and socially responsible manner. The second type of certification, known as “chain of custody” is available to everyone within the supply chain for a forest product, including sawmills, pulp mills, paper mills, merchants, and printers.

Chain-of-custody certification requires documentation of each step in the path from forest to consumer and ensures that the expectations associated with the FSC logo are genuine and verifiable.

Thus, in order for an end user to promote their products — for example, a printed piece — as FSC certified, each company associated with the product must have chain of custody certification. The forest must be certified. The sawmill chipping the logs and the pulp mill pulping the chips must be certified. The paper mill and the merchant and the converter and the printer all must have FSC certification. The process seems intimidating, but as the demand for FSC-certified products has increased, more and more links in the supply chain have become certified, making chain of custody certification much more achievable than it once was.

To quickly summarize the chain of custody standards, the merchant must demonstrate to the certification body that the paper is indeed certified through documentation on purchase orders, invoices and product labels. Similarly, the invoices, bills of lading and product labels presented to their customers must also reflect the certification. Once the certification body is confident that a verifiable paper trail exists, a certificate can be issued. For more information on FSC, including a list of certification bodies and the chain of custody standards themselves, visit the FSC website: [www.fsc.org](http://www.fsc.org).

## **Manufacturing Process**

Of course, the environmental impact of the paper industry extends beyond the forests. Paper manufacturers and consumers face a host of business decisions that impact the environment. For example, manufacturing unbleached groundwood fiber requires less potentially harmful chemical treatment than white kraft fiber, but produces a weaker, less attractive product that is often poorly suited for advertising. This is an extreme example, but there are many more subtle decisions that paper manufacturers face routinely. Understanding the environmental impacts of the paper manufacturing industry will help a merchant or printer guide their customers to the best paper for their needs.

Historically, white paper was made from fiber that had been bleached with chlorine. Dioxins were generated as a by-product of this process and later released into the environment with the effluent from the facility. Chlorine bleaching has essentially been abandoned in the United States in favor of the more environmentally benign hypochlorite (often referred to as ECF) or hydrogen peroxide (TCF) processes. However, elemental chlorine may still be in use overseas, and customers often inquire as to the bleaching process used.

Other toxic materials have been used in the manufacture of various grades of paper over the years. Carbonless paper was a particularly troublesome product, though

many changes have been made over the years to reduce its toxicity. Paper intended for the printing market should be free of toxic materials such as heavy metals, PCBs and organic solvents, but merchants may be asked to confirm this with their paper suppliers.

Another aspect of the manufacturing process that has garnered much attention in the past year is global warming and CO<sub>2</sub> emissions. Pulp and paper mills consume tremendous amounts of both water and energy to produce their products. Though CO<sub>2</sub> emissions are not yet regulated in much of the United States, many facilities have heeded the call of environmentally concerned customers and shareholders and have taken voluntary steps to reduce their carbon footprint. Merchants should not be afraid to ask mills to summarize their efforts to reduce water and energy consumption for their customers.

## **Buy Local, Print Local**

The transportation sector is one of the largest contributors to emissions of greenhouse gases. As the economy becomes more globalized, manufactured goods — and the materials that are used to produce them — are often shipped long distances. It's not uncommon for paper to be produced in the mid-west from trees grown in the southeast, then printed in the northeast and distributed across the country to consumers. And international trade only expands the distances further — Chinese paper manufactured from Brazilian eucalyptus, imported to a California merchant and printed in Chicago for a New York-based publication. Each of those transportation legs has significant emissions associated with it. As more companies begin to study their CO<sub>2</sub> footprint, there may be increased interest in reducing the geographic footprint of their publications — particularly those publications with a relatively localized audience. It should be noted that, in general, environmental impact and transportation costs go hand-in-hand. Due to less demand for fuel, short-haul transit is generally cheaper than long-haul and the environmental impact is similarly reduced. Rail transit is generally half as expensive as truck transit, due partly to fuel costs, but more as a result of the economies of scale. Greenhouse gas emissions from rail transit are also lower — as much as three to five times lower than if a similar amount of cargo was transported the same distance by truck. Merchants should be prepared to answer questions about the geographic source of the fiber and paper their customers purchase and may even wish to cultivate new relationships with mills and printers that are geographically close to those customers.

## **Customer Service**

Merchants and printers can provide a valuable service to their customers by helping them identify paper mills that offer recycled or certified papers. Tools like environmental calculators can provide details on the environmental impact

of choosing a recycled grade over a 100% virgin product. Another way for a merchant to help their customers produce an environmentally sensitive piece is to accurately estimate the quantity of paper required for their particular project. Paper unnecessarily lost to trim or over-estimating is both a waste of resources and finances. Merchants should maintain regular communication with their customer's production department to ensure that yield assumptions remain accurate and work closely with customers and suppliers to ensure that only the minimum amount of paper required for a particular project is ordered.

Merchants can help their customers evaluate long-term printing habits and decide whether it's better to choose custom roll sizes for each job to avoid trim losses or to standardize printing projects to better take advantage of paper inventory programs. In some cases it may be advantageous to recommend choosing a lower basis weight to reduce the overall fiber demand, or to suggest the end user review the mailing list to cull out duplicates and obsolete addressees. Individual orders might be a little bit smaller but, in the long run, the merchant has the opportunity to earn loyalty with attention to detail.

Environmental issues are once again in the forefront for both consumers and corporations. In the past, the business sector has been forced to react to environmental challenges through prescriptive, top-down regulatory strategies, with varying degrees of success. It appears that this wave of environmentalism will be somewhat different — with change driven through regulatory schemes designed to foster creating solutions to complex problems. These new regulatory tools will offer businesses much greater flexibility to adapt to a changing marketplace, but will also require more attention to detail if those businesses are to remain competitive and profitable in a changing business climate.

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