

# Two Types of Recycled Fiber, and Two Approaches to Making Recycled Paper

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Two types of recycled fiber - composed of either post-consumer reclaimed material or pre-consumer reclaimed material - can be used to make recycled paper. The two are fundamentally different, as specified in these definitions from the Forest Stewardship Council® (FSC®):

Post-consumer reclaimed material: Material that is reclaimed from a consumer or commercial product that has been used for its intended purpose by individuals, households or by commercial, industrial and institutional facilities in their role as end-users of the product.

Pre-consumer reclaimed material: Material that is reclaimed from a process of secondary manufacture or further downstream industry, in which the material has not been intentionally produced, is unfit for end use and not capable of being re-used on-site in the same manufacturing process that generated it.

Only post-consumer recycled paper embodies the circular economy

Post-consumer recycled paper embodies the circular economy - it is manufactured from recycled products that have served a purpose for end-users, then sold on the market where it again serves a useful purpose, and then can be recycled again. It goes to market and back in a sustainable manner.

Pre-consumer fiber, also known as post-industrial fiber, is recovered from paper used in industrial applications like printer overruns or newsstand returns. It does not reach end-users. And it is not a full-fledged member of the circular economy, because it never serves a useful purpose in the consumer marketplace before it is recycled.

Only recycled paper made using post-consumer reclaimed material, like Rolland paper, is sourced from recycling programs fed by the recycling bins filled with waste paper - magazines, newspapers, promotional materials, packaging, boxes, and office documents.

The environmental benefit of using post-consumer paper

The environmental benefit of using post-consumer recycled paper outweighs that of using paper made from pre-consumer reclaimed materials. While the latter does re-use materials and strive to reduce environmental impact, the former is sustainable: it reduces the usage of virgin fiber, which means more trees for the world, re-uses materials which have been used by consumers - contributing to the development of a circular economy - and saves materials from being landfilled.

The usage of post-consumer fibers also involves partnering with external organizations, local municipal governments or landfill operators to make systematic changes for diverting paper waste from landfills and closing the loop: it maximizes value chains, by not only feeding recycled materials into production, but also by recovering by-products and side streams of manufacturing for re-use.

Post-consumer recycled paper production does not prevent from reclaiming materials: for example, facilities like Sustana's Fox River Fiber recovers close to 99 per cent of residual materials from recycling processes for or use in new products, including animal bedding, molded packaging and seed encapsulation for fertilizers.

Virgin fiber from responsibly-managed forests has a role

Paper cannot be recycled forever - wood fibers can be reused five to seven times as new products - so virgin fiber sourced from responsibly-managed FSC-certified forests remains an essential input for sustainable paper manufacturers like Rolland.

This also encourages forestland owners to continue managing their lands sustainably, rather than selling them for development and other non-forest purposes. Forests are on the upswing in the United States: forest surface area has increased by three per cent over sixty years, while forest volumes have increased by 58 per cent.

Rolland has made post-consumer papers for some 30 years, focusing on consistency

Rolland first manufactured recycled paper using post-consumer fiber in 1989, and our longstanding commitment to minimizing our environmental footprint includes the use of renewable biogas energy since 2004.

A Life Cycle Analysis conducted by a third-party consulting firm shows that the entire Rolland Enviro Product line has a much smaller environmental footprint than the average virgin and 100 per cent recycled papers made in North America.

Due to its 100 per cent post-consumer content, deinking without chlorine, low water usage, and reliance on renewable energy, Rolland Enviro has broad environmental benefits compared to virgin paper:

62 per cent less impact on climate change, reducing global warming potential;

zero impact on biodiversity, with no endangered species at risk due to forestry; and

76 per cent less impact on water quality, through lower contribution to water eutrophication.

Rolland's superior environmental performance across the board reflects the fact that our paper mill is set up to manufacture post-consumer recycled paper, using premium recycled fiber from de-inking facilities in our Sustana business family. Our full control over the recycled pulping and papermaking processes also makes for superior quality assurance.

All this reflects a commitment of some 30 years to consistency throughout the recycled paper manufacturing process.

Differences between our long-term commitment to recycled paper, and competing short-term shifts

Our approach is very different from that of paper manufacturers which have added recycled fiber to the feedstock of paper mills set up to use virgin fiber, and reported increases in greenhouse gas emissions.

First, these are virgin paper mills, not fine-tuned to make recycled paper. Paper making is process-oriented so it's no surprise to see a change in a key input produce unfavorable results.

Second, in reporting an increase in GHG emissions, these papermakers do not perform a broad assessment of environmental impact, as in Rolland's LCA. They have measured and reported on one output only, which makes for a very narrow set of facts to build a scientific conclusion.

Rolland continues to believe sustainable paper is all about focusing on post-consumer manufacturing in the broad sense (in the paper mill and the fiber supply chain), and to performing comprehensive measurements of environmental impacts which point the way to improvements.

Our long-term commitment to post-consumer recycled paper, and to playing an active role in the circular economy, is not the same as short-term shifts to recycled paper and single-issue reporting of environmental impact.

And we believe well-informed paper users seeking sustainable solutions recognize the difference.