

Reimagining paper in the 21st century



With the North American paper industry lacking in its use of recycled fiber for manufacture of new products, one environmental group is undertaking a project that looks to improve, and increase, paper fiber recovery and the manufacturing of recycled paper.

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After more than 30 years of recycled-paper market development, recycled content has reached the dizzying height of six percent of the overall fiber that goes into printing and writing papers. Yes, just six percent – and only half of that is post-consumer. Put another way, more than 90 percent of the printing and office paper available in North America still has no recycled content at all.

How can that be possible, you might ask, given that so many government purchasers are increasingly specifying 100-percent recycled papers? Clearly, that six percent is particularly concentrated in a small subset of the printing and writing grades, especially copy paper and text/cover, where it may now have achieved a 10-percent market share. While the U.S. paper industry reports that recycled content overall makes up about one-third of its fiber, much of this fiber is used in high-recycled content products, such as cereal boxes and commercial janitorial tissue products.

These are great recycled products, but they cannot substitute for the lack of recycled content in printing and writing papers, most of which are made by the most environmentally demanding papermaking process. The greatest environmental benefits – reducing climate change gases, conserving forests, reducing energy and water use, cutting pollution and solid waste – are delivered by converting more printing and writing papers to recycled content.

Setting the stage

In the past, government purchasers, environmentalists and major corporate paper buyers collaborated to drive up recycled content and stimulate the development of more recycled papers by specifying higher post-consumer minimums. But that strategy is no longer sufficient because – and this is both the good news and the bad news – we are close to the limits of the current capacity for producing the deinked pulp necessary for making recycled

POLICY PROPOSALS TO STEP UP RECYCLED-PAPER PRODUCTION

Creating the framework for building a sustainable paper industry involves participation by recycling businesses and at all levels of governments. The following discussion proposals are intended to launch conversations and develop action items. These are not the only policy options, but they are crucial considerations in developing strategic plans.

1. Transitioning to resource management

GOAL: Change the driving force of municipal programs from collecting “wastes” to collecting “resources” for re-use and recycling, with more materials directed back into manufacturing.

Local governments

- Pay-as-you-throw billing for trash
- Larger recycling carts paired with smaller trash carts
- Increased recycling collection frequency, decreased trash collection frequency
- Incentive programs that encourage recycling participation
- More public recycling education
- Collection contract payment formulas that shift incentives from waste collection to emphasize high-quality recyclables
- Resource recovery parks that situate local re-use and recycling businesses together
- Zero-waste principles applied to resource management
- Closer collaboration with recycled-paper manufacturing facilities
- Shifting focus from diversion from landfill to how much collected material is actually made into recycled products

State/provincial and federal governments

- More coordination, support and direction
- Establishing local or regional resource recovery parks
- Encourage communities to reuse or

recycle 50 percent or more of their waste and businesses 90 percent

- Set and support zero-waste goals for product design and recycling

2. Maximizing fiber recovery

GOAL: Maximize all fiber recovery, with particular emphasis on office paper.

Local governments

- Landfill bans on paper
- Recycling collection programs for underserved populations
- Mandatory commercial recycling collection
- Multi-family housing recycling collection programs

State/provincial and federal governments

- Ensure recycling opportunities for all citizens
- Require businesses and organizations to recycle
- Research obstacles and determine solutions or alternatives
- Research optimal designs for multi-family housing collection programs

3. Maximize recovered-fiber quality

GOAL: Design recycling collection and processing systems to produce clean recyclables, so they can be marketed for highest and best use to domestic mills and others.

Local governments

- Include processing specifications in

recycling program contracts

- Require commercial paper collection programs to keep office paper clean and separated to supply to high-grade deinking mills
- Investigate tax incentives for creating green jobs in the recycling program, including processing

State/provincial and federal governments

- Identify the best technology and processing designs to produce high-quality recyclables
- Grants, tax incentives, credits, and other funding, to support new and efficient sorting equipment upgrades for materials recovery facilities to produce high-quality recyclables
- Compare effects of different collection and processing contract payment designs

4. Maximize recycling production capacity

GOAL: Maximize post-consumer recycled content in all paper manufactured or purchased in North America, with any virgin fiber harvested from certified sustainable sources. In particular, increase recycled content across all printing and writing papers, from the current six percent to a minimum of 15-percent post-consumer in five years, while working toward 30-percent post-consumer in 10 years.

All governments

- Procurement policies that specify uncoated paper with at least 50-percent

paper. The few deinking mills left are now running near maximum capacity, meaning that increases in recycled content will require investments in new capacity or expansions of existing capacity.

Even before the global economic crisis surfaced in 2008, North American paper companies were in decline, with many reducing or eliminating their research and development divisions, mergers and acquisitions constricting ownership and financial resources, pulp and paper mills closing, and new investments focused on

China and South America. Newsprint, and most packaging mills, have been hit hard, both by reduced domestic demand and by competing overseas production. Worse, the types of recovered paper needed for newsprint, corrugated and paperboard mills are already collected at extremely high rates, and much of it is shipped to China as the feedstock for its recycling mills.

Many assume that printing and writing mills are meeting the same fate, but the story is actually quite different. While

China and South America hope to compete for U.S. and Canadian printing paper markets, *they are not including recycling in their printing and writing paper mills.* The office paper and printing scraps needed for making recycled printing and writing papers are not being exported at the high levels seen for old newspaper (ONP) and old corrugated cardboard (OCC). In addition, surprisingly, nearly half of paper from offices and commercial establishments is still uncollected – despite being the paper grade needed to make recycled printing

post-consumer content (coated papers with 30-percent post-consumer), with appropriate lead times for expanding industrial capacity

- Tax incentives for businesses that buy recycled paper

Local governments

- Build terms into collection and processing contracts that direct local fiber to regional recycling mills

State/provincial governments

- Specific assistance and support for siting and permitting recycling production facilities
- Funding and/or tax incentives for investing in recycling deinking technology and equipment
- Coordinate regional plans for optimizing a consistent recycling system and infrastructure that maximizes materials and environmental savings

Federal government

- A "resource fee" for paper products made solely from virgin fiber and a "resource credit" for recycled content, with the fees supporting expansion of fiber recovery programs and deinking capacity
- Tax incentives for paper companies manufacturing products with at least 50-percent recycled content
- Funding and/or tax incentives for investing in recycling deinking technology and equipment
- Support research into optimal recycling technology
- Coordinate plans that optimize the recycling system and infrastructure

5. Create a climate-friendly paper industry

GOAL: Significantly increase the pre-

consumer and post-consumer recycled content in all paper products.

State/provincial and federal governments

- Tax incentives for paper mills using 50-percent, or more, post-consumer recycled content. Could include credit for pre-consumer, as well, as long as post-consumer is also required
- Tax incentives for paper mills using such carbon-reducing energy sources as wind, solar or geothermal
- Funding support to update recycling collection vehicles to cleaner, more fuel-efficient options, such as hybrid electric or fuel-cell technology
- Evaluate wood biomass claims as a "clean" energy source, its impact on forest fiber demand and on the use of recycled fibers
- Collaborate with industry to research potential energy sources from recycled mill sludge
- Research the best environmentally-sustainable transportation methods for conveying production feedstocks, as well as end-products to market
- Determine the most accurate and comprehensive assessment tools for companies calculating their carbon footprint
- Mandatory industrial reporting of comprehensive carbon impacts, including accurate accounting for carbon emitted by forest harvesting

6. Rebuild a thriving, environmentally-sustainable paper industry

GOAL: Rebuild an efficient, environmentally-sustainable paper industry within North America to serve its major paper-purchasing demand, without requiring global transportation. Model a paper industry that produces superior products from the smallest possible

environmental footprint. Policymakers can prioritize and incentivize a "green" paper industry.

All governments

- What are the best ways to ensure high quality recovered fiber?
- What are the best ways to ensure high fiber recovery rates?
- How can governments at each level best support establishment or expansion of new recycled paper production capacity?
- How many different ways can buying recycled paper be built into purchasing decisions?

7. Rebalance the recycling system to meet manufacturing needs

GOAL: Tie the collection programs more faithfully to the manufacturing processes through greater collaboration between recycling sectors and agreement on the system's conceptual framework.

Local governments

- Best methods of ensuring that programs and contracts result in recyclables turning into high-quality recycled products
- Responsibilities beyond diversion
- Coordination with recycled product manufacturers

State/provincial and federal governments

- Coordination, collaboration, or framework needed to improve the whole system, versus only individual sectors
- Methods to ensure resources for the research necessary to improve optimal functioning of the recycling system
- Strategic planning and implementation to support the system's functioning as a whole

and writing papers.

Mixed paper accounts for the biggest increase in exported recovered fiber. Much of the high-grade types of recovered paper that are being exported are actually unintentional components of mixed grades, which also includes newsprint, corrugated and paperboard. Because many kinds of paper mills cannot use recovered paper in a mixed form, China's access to low-cost hand-sorting has played a major role in creating markets for this commodity. But, increasing domestic recycled-content

printing and writing paper will require clean, sorted bales of high-grade papers – still possible if new office collection programs do not mix their office paper with OCC, ONP or curbside.

So, given that North America is the primary source of recovered paper, high amounts of office papers are still uncollected and uncommitted, environmental benefits soar by adding recycled fiber to printing and office papers, and transporting fiber and products around the world creates unnecessary climate

change impacts and other costs, perhaps we should question the paper industry's assumption that its future is overseas.

In fact, if the way out and the way forward is through a green economy, as the new U.S. government and many environmentalists and economists argue, then this is the time to begin serious discussions about what changes could set the North American paper industry on a path toward renewed strength, leadership and, most importantly, sustainability. Rather than lose paper industry jobs,

create more environmental damage through unnecessary global transportation, and be subject to import vagaries, environmental groups, such as the more than 100 members of the Environmental Paper Network (EPN), envision a revitalized domestic paper industry that leads the new “green economy” and sets the environmental standard for paper production globally.

The mission

The issue is complex. Increasing recycled paper production requires strengthening the recycling system’s conceptual framework, along with even more aggressive recovered paper collection and improved quality, new investments in parts of the industry that paper companies have increasingly abandoned, and more extensive and reliable commitments to purchase recycled paper products on the part of large paper users.

The EPN’s RePaper Project is working to catalyze collaborative innovation and creativity for this revitalization through stimulating increased paper recovery, as well as increased industrial capacity for producing recycled-content paper. We need the help and support of governments at all levels, as well as the active engagement of collectors and processors to better focus the recycling system on recapturing materials suitable for manufacturing and on managing resources rather than waste.

Expanding capacity to make recycled papers, especially in the current economic climate, will require long-term thinking and strategic coordination at all levels. Without new sources of high-quality recovered fiber, additional capacity is not feasible. But, a concerted effort by communities all across the nation, to collect all office paper and produce clean

bales, would provide these new sources. In some regions, they could even be directly and specifically committed to supporting local paper mills. Paper purchasers will have to maintain and increase their commitment to buying recycled papers even when the supply is tight, in order to drive conversion to more sustainable paper production processes.

The U.S. paper industry represents nearly 10 percent of reported U.S. annual greenhouse gas emissions. On a global scale, the paper industry produces three-times the climate emissions of the airline industry. As the paper industry closes more mills and leaves more communities, North America continues to lose a valuable industry that provides 1.5 million jobs in the U.S. alone and adds billions, even trillions, of dollars to the economy. While imports are valuable and worthwhile, retaining a viable industry at home is also essential, and even important to national security.

With so much of the global paper purchasing market still centered in the U.S. and Canada for the foreseeable future, and with the urgent need to radically reduce carbon-based energy sources and forest demand, the recently evolving industry trend toward using pulp sources in South America, shipping them to Asia for papermaking, then transporting the products to Europe or North America, makes less and less environmental and economic sense. This is particularly ironic when pulp and recovered fiber are also shipped from North America to Asia, then shipped back in the form of boxes, printed books and office/school products.

As countries with huge populations, such as China and India, build up their paper industries, clearly the environmental footprints of paper companies need to be radically and quickly reduced in order to

meet significantly increased paper demand in the future without using consequently more resources.

Rethinking, rebuilding and revitalizing the recycling and paper production systems in the U.S. and Canada would create good green jobs in the industry, strengthen communities, provide high-quality paper products transported primarily within regions, instead of between continents, significantly reduce the production footprint for paper, and create the production model needed for a more inclusive world in the 21st century.

Appropriate recycling options vary according to geographic regions, climate, demographics, size and type of collection program, political structure and available markets. But more collaboration between recycling sectors and greater agreement on the system’s conceptual framework could tie the collection programs more faithfully to the production processes, thus creating more reliable and comprehensive recycling. Achieving this may be just the key to building, once again, a thriving paper industry renewal on recycled content. 

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