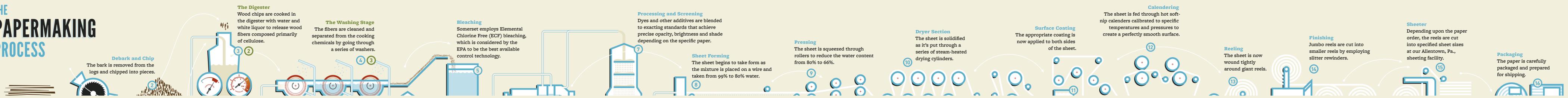


THE PAPERMAKING PROCESS



PCW
Sappi is a strong advocate for recycling. However, we do not believe that the use of recovered fiber is a one size fits all solution and we promote a practice of "best use" for recycled fiber. Once paper has been recovered, it is important to put the recovered fiber to its best use—in the right locations and the right grades based on evaluating and balancing economic and environmental consequences. Ultimately, recycled fiber should be used in products where it displaces fiber with a higher carbon footprint. Adding recycled fiber to our grades made at Somerset actually raises our carbon footprint.

ANOTHER LOOK AT PCW
Scan this QR code to see a video explaining the use of PCW and papermaking. You can also see the video by visiting sappi.com/eQ.

WATER
The Somerset Mill draws its water from the Kennebec river and utilizes it throughout the mill—from cooking pulp to the papermaking process. The water loops within the mill are complex, designed to use both the water and the energy associated with it as efficiently as possible. About 10% of the water intake is evaporated and leaves the mill as steam but remains in the local ecosystem. The remaining 90% is returned to the Kennebec River.

CONTINUOUS PRODUCTION CYCLE
Unlike many other mills, the coating and calendering process is done on-line, in a continuous process—allowing for greater control over the process and the creation of a more consistent product. State-of-the-art scanners provide continuous feedback to the control equipment so that the coat weight, basis weight, and moisture are within targeted ranges. Since the entire process is conducted on-line, the paper must be exceptionally strong so that it can go through the process at speeds up to 4,000 feet per minute without breaking. Somerset's superior stiffness and printed ink gloss are a direct result of this on-line calendering process.

COATING RECLAIM
Part of the process of making coated paper is akin to applying paint to an uncoated sheet. The Coating Reclaim process gathers the left over coating created when a product change is made on the machines so that all the coating materials are "reclaimed" for future use.

PRODUCTS
The Somerset Mill has three state-of-the-art papermaking machines that are capable of producing multiple brands, weights and finishes. Sappi continually invests in these machines to ensure consistent availability and exceptional production flexibility. No other paper manufacturer offers such backup assurance.

Sustainable Forestry
Somerset will source wood only from forests that are sustainably managed.

White Liquor
A mix of various sodium-based chemicals is used to dissolve the lignin from wood.

Black Liquor
The washing process recaptures the cooking chemicals in the form of weak black liquor.

Pulp Refinement
The pulp is modified to enhance its ability to bond.

The Evaporators
Water is removed from the weak black liquor to create a higher concentration of solids that can be burned in the recovery boiler.

The Recovery Boiler
The heat from the burning of the black liquor in the recovery boiler is used to raise the temperature of the water in the boiler, ultimately generating steam.

Green Liquor
The molten smelt is quenched in water to create green liquor.

The Slaker
Calcium oxide, also known as lime, is added to green liquor in the slaker, causing a chemical reaction that converts the green liquor into white liquor.

White Liquor
The white liquor has now made a complete loop as it gets pumped back into the digester to start the whole process over again.

CERTIFIED WOOD
All the wood at Somerset comes from certified or controlled sources—ensuring the forests are managed in a sustainable manner. The mill achieved triple Chain of Custody certification from the Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI) and the Programme for the Endorsement of Forest Certification (PEFC).

MILL INVESTMENT
The Somerset Mill's carbon footprint has been significantly reduced thanks to a \$36 million investment in the chemical recovery process. As a result, the capacity of black liquor has been increased and is now processed far more efficiently. Because of the magnitude of the upgrade, Somerset meets requirements for Green-e certification due to electrical power generated from recovery boiler steam.

TIRE DERIVED FUEL
Stockpiles of discarded tires are an environmental nuisance. Tires can collect water, attracting mosquitoes and ultimately leading to problems with mosquito-borne diseases. At Somerset, we have worked with a supplier that diverts tires from landfills, converts them to chips and transports them to the mill, where they are used as an alternative fuel source—a great example of converting a waste stream into energy.

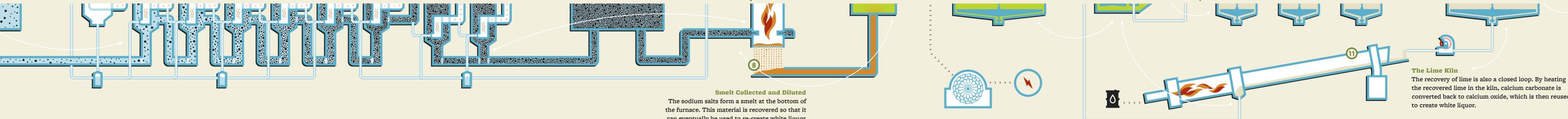
HEAT EXCHANGERS
Heat exchangers are used throughout the mill to capture and reuse thermal energy. By installing equipment to recapture heat, the mill becomes more energy efficient and ultimately uses less fuel, resulting in cost savings as well as reduced emissions.

LIME KILN
While this recovery process involves the constant reuse of inorganic chemicals and generates renewable energy from black liquor, there is a need for some fossil fuels. In order to reach a temperature that is hot enough, the lime kiln requires either fuel oil or natural gas.

RECOVERY BOILER
Scan this QR code to see a video demystifying the Recovery Process. You can also see the video by visiting sappi.com/eQ.

Upgrading the recovery process has been a five-year project culminating in the winter of 2011. Over \$36 million was invested to vastly improve the efficiency of the chemical recovery process. As a result, the mill increased its capacity to use black liquor, a renewable energy fuel source.

THE CHEMICAL RECOVERY PROCESS



Smelt Collected and Diluted
The sodium salts form a smelt at the bottom of the furnace. This material is recovered so that it can eventually be used to re-create white liquor.

The Lime Kiln
The recovery of lime is also a closed loop. By heating the recovered lime in the kiln, calcium carbonate is converted back to calcium oxide, which is then reused to create white liquor.

THE SOMERSET MILL

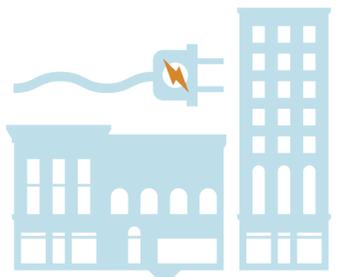
A STORY OF SUSTAINABILITY



FACTS ABOUT SAPPi'S SOMERSET MILL
 There are so many unique stories and statistics surrounding the Somerset Mill. We thought we'd share some of the more interesting highlights in order to give you a better picture of why Somerset has emerged as a beacon of sustainability in our industry, and one of the most admired paper and pulp mills in the world.

#1
 The largest coated free sheet paper mill in North America based on production

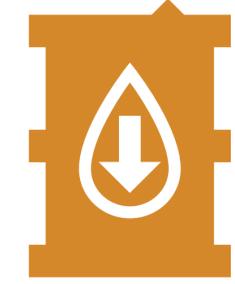
85%
 More than 85% of the total energy used at Somerset is derived from renewable resources. Sappi's high use of renewable energy results in the lowest reported carbon footprint among domestic coated paper suppliers.



56,000
 The Somerset power plant can provide enough electricity for a city of 56,000 people per year

In 2010, the mill reduced its annual oil usage by over 200,000 barrels

200,000



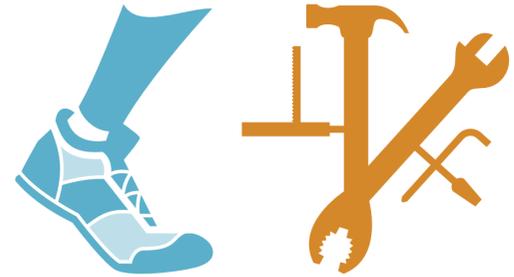
Somerset operates three modern papermaking machines that utilize Sappi's patented online finishing technology

3/4

As a result of recent investments, the Somerset Mill uses Green-e® certified energy

Designed for optimal web strength and superior heft and stiffness, Somerset is engineered for the long run

SOMERSET®



Somerset produces four Sappi brands: Somerset®, Opus®, Flo® and Lusterprint®

OPUS®
 The do-it-all paper, a one-stop solution for an expansive range of high-quality printing needs

FLO®
 The dependable economy paper that helps you stretch your budget without compromising quality or environmental responsibility



FDA approved for direct food contact and used as the glossy outer ply for pet food and other consumer bags



LUSTERPRINT®

Somerset achieved triple Chain of Custody certification from the Forest Stewardship Council®, Sustainable Forestry Initiative and the Programme for the Endorsement of Forest Certification

2,400
 Somerset makes 2,400 tons of paper a day and 800,000 tons a year



Tucked away in the foothills of Central Maine, Sappi's Somerset Mill has made its name as one of the largest coated paper mills in the world. But while its size and technological sophistication have fueled its reputation, the mill is fast becoming recognized as a model of sustainability.

Led by a \$36 million investment in a recovery boiler upgrade, Somerset is examining every single step of the papermaking process to find new ways to lower its carbon footprint.

Of course, the only way to gain a real appreciation for all of Somerset's groundbreaking technology and sustainability efforts is to illustrate the entire papermaking process and get a sense of how all these initiatives play out from the moment wood enters the mill until Opus, Somerset, Flo and Lusterprint are shipped throughout the world.



Scan this QR code to see a video highlighting all the unique attributes of the Somerset Mill. If you don't have a QR Code Reader installed on your phone, simply visit get.neoreader.com. Once the app is installed, you can use your device's camera to scan the code and watch the video. You can also see the video by visiting sappi.com/eQ.

Production Notes
 Somerset Satin Text 80lb/118gsm 4-color process, match blue and match orange plus overall satin aqueous Vertical open gate into accordion fold



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