



# Sappi North America 2018 Sustainability Report

PROSPERITY | PEOPLE | PLANET

**sappi**

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## About this report

Sappi North America has been publicly reporting progress on sustainability initiatives since 2008 as part of a global sustainability report issued annually by Sappi Limited. This is the eighth consecutive year that Sappi North America has issued its own sustainability report, with consolidated global sustainability performance included in the annual report to shareholders. Sappi Limited will continue to publish a separate online report in conformance with the Global Reporting Initiative's G4 framework and disclosing compliance with the United Nations Global Compact (UNGC), to which we are a signatory.

Covering FY 2018 (October 02, 2017 to September 30, 2018), this year's report focuses on performance against goals and an update on key performance indicators. The report includes environmental performance data for Sappi North America's three US manufacturing operations in Skowhegan, Maine; Westbrook, Maine; and Cloquet, Minnesota. Social responsibility and prosperity metrics are reported for the full region, including our corporate facilities, sales offices and sheeting facility in Allentown, Pennsylvania. Copies of reports produced by Sappi Limited can be accessed at [sappi.com/investors](http://sappi.com/investors). Online access to sustainability reports from Sappi's regional divisions in Europe and South Africa can be found at [sappi.com/sustainability-sappi-group](http://sappi.com/sustainability-sappi-group).

# A letter from Steve Binnie



I would like to congratulate the Sappi North America (SNA) team on another successful year, truly embodying this year's theme of renewal. The business underwent a significant change with the conversion of Paper Machine 1 (PM1) at the Somerset Mill to be able to produce packaging and speciality paper grades. We also commenced a project to increase dissolving pulp capacity at Cloquet. These exciting changes are part of Sappi's global strategy to boost capacity in higher growth and higher margin product segments. Despite the inevitable disruption which accompanies such significant capital projects,

the business was able to offset cost pressure in the graphic paper business, nearly doubled packaging business volumes and improved overall profitability after the conversion of Somerset PM1. Importantly, to ensure that SNA was ready for the change, employees underwent 114 hours of training per employee—almost twice the amount considered best practice for US companies.

The business introduced the Proto and Spectro paperboard brands for premium packaging and graphic applications, and benefited from the global launch of Verve—Sappi's dissolving wood pulp brand range. We ensure the sustainability commitment of our products by focusing on securing certified woodfibre, both FSC and SFI, where we have invested in their smallholder certification programme to help build local economies.

All the while, Sappi North America recorded its best-ever safety performance. Safety is of the utmost importance at Sappi and the core of our operating ethos. I applaud the North American team for their unwavering commitment and hard work towards building a safe and prosperous Sappi, and look forward to getting the global organization to our ultimate goal of zero injuries.

SNA can look with confidence towards 2019 as it secures greater market share while delivering on its sustainability commitments.

**Steve Binnie**  
Chief Executive Officer  
Sappi Limited

# Overview of Sappi North America

Sappi North America—headquartered in Boston, Massachusetts, with over 2,000 employees in the United States and Canada—is a subsidiary of Sappi Limited. Our three North American mills have the capacity to produce 1.35 million metric tons of paper and 865,000 metric tons of kraft and dissolving wood pulp (DWP). The success of our four diversified businesses is driven by strong customer relationships, world-class assets and outstanding products and services, backed up by solid technical, operational and market expertise. This year, we've invested in the future of our packaging business with a comprehensive rebuild of Paper Machine 1 (PM1) to offer new paperboard products that bolster our legacy of innovation.



## Pulp

Sappi North America is an integrated pulp and paper producer with state-of-the-art pulp mills. We produce bleached kraft pulp for our own use and dissolving wood pulp (DWP), recently renamed Verve, for sale to other manufacturers. With the 2013 conversion of the pulp mill at Cloquet, we are capable of producing 340,000 metric tons of dissolving pulp or 470,000 metric tons of bleached kraft pulp. Our world-class mill in Skowhegan is capable of producing 525,000 metric tons of bleached kraft pulp. Combined with our South Africa DWP production, Sappi Group is one of the largest producers of DWP in the world. To learn more, visit [sappi.com/dissolving-wood-pulp](http://sappi.com/dissolving-wood-pulp).

## Printing papers

Our coated papers are specified for printing projects in which top quality is essential—including direct mail, fashion magazines, catalogs, car brochures and art books. Sappi offers a broad selection of fine printing papers in a variety of brightness levels, finishes and weights in sheet, web and digital formats. Our innovative brands are McCoy®, Opus®, Somerset®, Flo®, EuroArt Plus and Galerie. To learn more, visit [sappi.com/printing-papers](http://sappi.com/printing-papers).

## Casting and release papers

Sappi North America is the world's leading supplier of casting and release papers for the fashion, decorative laminate, automotive and engineered films industries. Our release papers—including the globally recognized Ultracast® brand—provide the surface aesthetics for synthetic fabrics used in footwear, clothing, upholstery and accessories, as well as the textures for decorative laminates found in kitchens, baths, worktops and flooring, and other decorative surfaces. To learn more, visit [sappi.com/sappi-casting-release-paper](http://sappi.com/sappi-casting-release-paper).

## Packaging and specialty papers

Following a substantial rebuild of Paper Machine 1 (PM1) and modernization of the woodyard at our Somerset Mill, this year we launched Proto® and Spectro™: two new single-ply paperboard brands for luxury packaging, folding carton and food service applications. Our original domestically produced packaging grades include our grease-resistant LusterPrint®, designed for use with a wide variety of products such as pet food, popcorn, coffee and bakery products. LusterCote® is a coated one-side (C1S) paper designed for labeling and other converting applications, such as litho label, point-of-purchase displays and envelopes. We also offer many specialty papers produced at our Alfeld Mill in Germany, including Algro Design—a solid bleached board used in folding carton applications and the Algro Sol line of clay-coated, silicone-based release papers. To learn more, visit [sappi.com/packaging-and-specialty-papers](http://sappi.com/packaging-and-specialty-papers).

## A strong global group

Sappi North America is a subsidiary of Sappi Limited (JSE: SAP)—a global company headquartered in Johannesburg, South Africa. Sappi Limited has more than 12,000 employees in 35 countries, with manufacturing operations on three continents (ten mills in Europe, three mills in North America and five mills in South Africa). Sappi is focused on providing dissolving wood pulp, packaging and specialties papers, printing papers, biomaterials and biochemicals to our direct and indirect customer base across more than 150 countries. Each year, we produce approximately 5.7 million tons of paper, 2.3 million tons of paper pulp, and 1.4 million tons of dissolving wood pulp. Since 2008, Sappi Limited has been a signatory of the United Nations Global Compact (UNGC), which sets forth ten broad social and environmental principles. The Group is working to strengthen the integration of our own global and regional sustainability goals in support of the UN Sustainable Development Goals. To learn more, visit [sappi.com/group-profile](http://sappi.com/group-profile).

# A letter from Mark Gardner



2018 was an enormously important, transformational year for Sappi North America (SNA). We executed on several fronts to make our company sustainable for the long term. Through significant investments in our people and in our mills, and rigorous attention to our high standards for safety, operational efficiency and environmental stewardship, we are well on our way to becoming the thriving, diversified, growing business we set out to be just a few years ago. Let me share a few of my highlights and reflections for the future:

## Safety

Thanks to the full organization's focus on safety, we achieved a Lost Time Injury Frequency Rate (LTIFR) of 0.35 for the year—the lowest in Sappi North America's history. I am very pleased by this result, particularly when viewed against the backdrop of several significant capital projects which brought new contractors, vendors, and equipment to the mills. We remain committed to our goal of zero injuries and will continue to invest in programs to instill personal safety awareness and accountability as well as the basics of safety training.

## Management of change

In fiscal year 2018, employees at SNA, including both hourly and salaried, received on average 114 hours, or nearly three weeks, of training. This is a big investment, but vital to our success as we recruit new talent onto our team or ask our veteran employees to take on new challenges. With our entry into new packaging markets, a full management of change training program was undertaken at the mills with our marketing and sales teams, as well as technical service, credit, and logistics—all to ensure that we are capable of meeting customer expectations that are new to us.

## Reduction of waste and investment in efficiency

No company can be truly sustainable without having the right DNA around driving out waste and inefficiency. To do otherwise is costly, squanders natural resources, and hurts our competitiveness. While we sustain a very low carbon footprint (0.38 tonne/admt) due to our high reliance on renewable fuels like biomass, we also strive towards a smaller footprint through overall energy efficiency and waste reduction in both our paper and pulp mills. This year, we saw particular success in reducing waste in our pulp mills, achieving an 18 percent reduction from our 2014 baseline.

## Forest stewardship

Healthy, robust, well-managed forests are not just our lifeblood, but a national treasure, providing a haven for wildlife, protecting watersheds, and playing a critical role in the carbon sequestration cycle. Sappi North America understands this holistic picture and sources wood and pulp for its mills only from wood baskets that are known to be low risk and sustainably managed. In fact, we see responsible sourcing of fiber for our products as a key way to create value in standing forests and avoid conversion of forests to other uses like commercial development. In 2018, 58 percent of our wood fiber was certified and, as importantly, 100% of our wood and pulp is sourced from well-managed forests, avoiding controversial sources. SNA also contributed to educational outreach among loggers, local communities, and schools to build awareness of sustainable forestry.

## Sustainable success

Back in 2015, Sappi Limited laid out a vision for the future. In our 2020Vision, we declared that within five years, we would be a \$1 billion EBITDA company with a strong balance sheet, and with three healthy businesses: printing papers, packaging and specialties, and dissolving wood pulp. With the close of fiscal year 2018, we are three years into that journey and have made much progress: Group EBITDA was at \$762 million, and even with significant capital expenditure for growth projects, net debt to EBITDA remained at our target ratio of two times. Notably, packaging and specialty paper volumes worldwide exceeded 1 million tons, reaching a key benchmark for diversifying our product portfolio.

## Sappi North America on the move

Here in North America, that success is tangible. In the last few years, we have completed the modernization of our wood room at Somerset to reduce waste and cost, and we have completely rebuilt Somerset PM1 to make a full range of quality paperboard grades—branded as Spectro, Proto and LusterFSB—as well as maintained production of our iconic web graphic grades, Opus and Somerset. At Cloquet, we upgraded the headbox on PM12 to expand our capabilities to make complementary packaging and graphic grades, and we are well on our way to completing a de-bottlenecking project in the pulp mill to increase production of Verve—the Sappi-branded dissolving wood pulp product sold worldwide.

## Thoughts on the future

True success is earned only when our customers and our suppliers choose to do business with us, and our local and global communities respect and trust the integrity of the actions we take. We know that there are many choices in the marketplace and that to achieve sustainable business success, we must share our vision and strategy with our employees, and all of our constituents whose trust we depend on. The stories and case studies contained in this year's Sustainability Report are part of that compact. I look forward to a successful 2019 and beyond, and thank you for your support—it is never taken for granted.



**Mark Gardner**  
President and CEO,  
Sappi North America

# Corporate governance

Sustainability is not just a business philosophy at Sappi North America—it permeates our corporate structure with formal responsibilities, defined goals, and accountability demanded from each of our four business units and every aspect of our operations.

To learn more about our sustainability governance visit [sappi.com/sustainability-governance](https://sappi.com/sustainability-governance).

## Sustainability Steering Committee

**Mark Gardner**

Chair, President and CEO

**Anne Ayer**

VP, Corporate Development  
and Dissolving Wood Pulp

**Bob Bertolami**

VP, Procurement

**Bob Forsberg**

VP, Sales and Business  
Development

**Deece Hannigan**

VP, Packaging and  
Specialties Business

**Mike Haws**

VP, Manufacturing and R&D

**Annette Luchene**

VP and CFO

**Sarah Manchester**

VP, Human Resources  
and General Counsel

**Jennifer Miller**

Chief Business  
Sustainability Officer

**Rick Skoglund**

VP, Printing Papers



## Sappi North America locations

- Headquarters
- Sites (3 Mills, 1 Sheeting Facility, 1 Service Center, 1 Technology Center)
- Sales Offices (6)
- Regional Distribution Centers (4)



## Sustainability Council

### Alexander (Sandy) Taft, Chair

Director, Sustainability

### Rebecca Barnard

Manager, Forestry Certification

### Mary Buckelew

Manager, Inside Sales-National Accounts  
South Portland Office

### Melissa Johnson

Manager, Compensation and Employment  
Boston Headquarters

### Micki Meggison

Process Improvement  
Black Belt  
Westbrook Mill

### Lynne Palmer

Manager, Packaging  
Product Stewardship  
Technology Center

### Paige Pomeroy

Research Scientist  
Technology Center

### Chuck Qualey

Senior Engineer  
Somerset Mill

### Rob Schilling

Environmental Manager  
Cloquet Mill

# A new team to drive us forward

2018 was a year of transformation for Sappi North America (SNA). We rebuilt a paper machine, developed an entirely new packaging line, helped launch exciting new brand positioning for our dissolving pulp product, and established a creative, passionate sustainability team to set the course for our future.

Sandy Taft, Director of Sustainability, joined us in September 2018; Rebecca Barnard, Manager of Forestry Certification, in January 2018; and Lynne Palmer, Manager of Packaging Product Stewardship, assumed this important new role in 2017 as part of our move into the paper-board market.

All three are now fully engaged, working alongside Jennifer Miller, Chief Business Sustainability Officer, and the rest of the senior leadership team at SNA to ensure our business strategy reflects a holistic approach to sustainability principles.

What sets this team apart is their shared commitment to a science-based approach to sustainability, a collaborative spirit, and a passion for getting things done.

## The new experts

Sandy sees his role as Director of Sustainability as “the knitter, pulling in the threads of all the good work of others” to create a holistic approach to sustainability. “I was immediately struck by the strong culture here, how so many people throughout the organization own sustainability. I want to build on that spirit.” Sandy recognizes that sound, well-executed, and leading-edge sustainability strategies create business value: “The right focus



### **Sandy Taft**

Director, Sustainability

Email: [Sandy.Taft@sappi.com](mailto:Sandy.Taft@sappi.com)

Twitter: [@sandytaft1](https://twitter.com/sandytaft1)

LinkedIn: [linkedin.com/in/alexander-sandy-taft](https://www.linkedin.com/in/alexander-sandy-taft)



### **Rebecca Barnard**

Manager, Forestry Certification

Email: [Rebecca.Barnard@sappi.com](mailto:Rebecca.Barnard@sappi.com)



### **Lynne Palmer**

Manager, Packaging  
Product Stewardship

Email: [Lynne.Palmer@sappi.com](mailto:Lynne.Palmer@sappi.com)



The new Sustainability Team, Lynne Palmer, Sandy Taft and Rebecca Barnard (left to right), work alongside Jennifer Miller, Chief Business Sustainability Officer.

doesn't just drive efficiencies, waste reduction and a lower environmental footprint," he observes. "It provides the broader perspective of the problems that our customers want us to solve. A successful sustainability strategy puts us in line with the needs of our customers and creates an edge for us in the market."

Lynne, a chemical engineer by training and a long-term employee at our Technology Center, has broad experience in papermaking, product development and anticipating the needs of our customers. In her new role, she focuses both up and down in the supply chain to ensure that Sappi North America's food packaging products meet stringent governmental food safety regulations and customer expectations for product safety. What does that have to do with sustainability? Everything.

"Diversifying our product mix is key to sustaining business prosperity: the first 'P' in Sappi's sustainability pillars. Developing renewable, paper-based packaging as an alternative to plastic honors our Planet pillar, and of course product safety is all about People, keeping our employees, consumers and the general public healthy and safe," Lynne explains.

Rebecca brings a decade and a half of forest management and policy experience to SNA in her current role as Forestry Certification Manager. Most recently, Rebecca served as the National

Forestry Programs Manager at the National Wild Turkey Federation (NWTf). Earlier, Rebecca was the Forest Certification Coordinator for the State of Minnesota, Department of Natural Resources where she was responsible for managing dual SFI and FSC certification on nearly 5 million acres of state-administered forestlands, one of the largest certified land bases in North America. At SNA, Rebecca is responsible for material risk assessments for both wood and pulp suppliers, managing our FSC, SFI and PEFC Chain-of-Custody and fiber sourcing certificates, and providing training, support and strategic direction to Sappi staff on certification-related matters.

In Rebecca's view, it is critical to promote an inclusive approach to the three certification systems, and to educate our customers and end-users on the value that certification brings:

"How else can we provide our customers with the security of knowing that our wood is sourced from well-managed sustainable forests, where proper forestry practices ensure that the interests of wildlife, biodiversity, water quality, soil conservation, forest health, and the needs of local communities are all met for current and future generations?" Rebecca advocates for a transparent, community-based approach to forest management. "Forestry is an art and a science that involves management of the forest and people in order to achieve balanced objectives."



### A collaborative approach

Sappi North America's sustainability leaders stress their collaborative working relationship. "Rebecca's wood fiber certification programs ensure our forests for the future," says Sandy Taft. He adds, "Lynne's new space in packaging offers a bright spot for the future of our business and gives our customers a choice in sustainable packaging materials with a lower carbon footprint."

Sandy is also connected with Sappi Limited's broader sustainability efforts, working closely with his counterparts in Europe and South Africa. The tactical approaches in each region may be different, due to regulation, laws or unique markets, but the commitment is the same. "We take a One Sappi view of how we manage our sustainability performance," he comments. "The same commitment to fact-based and transparent reporting, with a global focus on safety, employee engagement, and climate policy, mitigation and resilience."

Sandy, who prior to coming to Sappi held a similar sustainability role with National Grid—a UK based energy company that also operates in the northeastern US—believes that knowing our customers and understanding their sustainability interests is one key to success. "It is always best as a collaborative effort," he says.

### Inclusive employee engagement

Sandy stresses that for sustainability efforts to be successful, there must be employee engagement. It is a theme all three leaders strike. Rebecca wants every Sappi employee to understand the importance of—and Sappi's role in supporting—vibrant, productive well-managed forests: "I was inspired that in our most recent certification audit, our organization was commended for its strong culture, including mentorship of our newest foresters. This shows Sappi's commitment and investment in the future of our forests and people!"

Over the past year, Lynne has led a significant management of change initiative, training Somerset employees to fundamentally rethink how they work. She is impressed by how everyone in the mill has responded to new standards under a Food Safety Management System—from monitoring and managing process cleanliness, to employee hygiene, to management of their own meals which are a potential source of contamination. Lynne says, "We have a large operation at Somerset, and making these changes involves everyone. Employees are asking great questions so they build their understanding of our food safety guidelines, and that is critical."





### Meeting the challenges of tomorrow

"When you are in a room with Sandy, Rebecca or Lynne, what strikes you is their optimism, energy and enthusiasm. I couldn't be more confident in the team we have assembled to help set our course for 2020 and beyond," Jennifer comments. "Their passion, expertise, and willingness to tackle the detail to get the right result is inspiring." As Lynne explains, "Our entire team is making decisions and taking actions that don't just solve today's issues but set the path for solving tomorrow's challenges."

"When you are in a room with Sandy, Rebecca or Lynne, what strikes you is their optimism, energy and enthusiasm. I couldn't be more confident in the team we have assembled to help set our course for 2020 and beyond."

**Jennifer Miller**, Chief Business Sustainability Officer



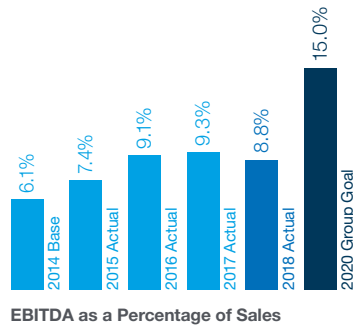




# Sustainability goals

At Sappi North America (SNA), we keep sustainability at the forefront of our operations. Together with the 2020Vision—Sappi's global growth strategy—we use our sustainability goals program to set targets, initiate improvement actions, and monitor our commitment to progress. Our goals are reflective of the desires of our employees, customers, and investors.

## Prosperity

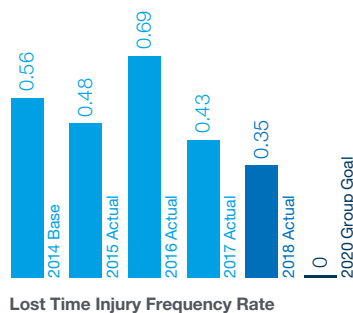


### Contribute to 15 percent group EBITDA margin target

Earnings before interest, taxes, depreciation and amortization (EBITDA) is a standard measure of profitability and financial performance. Sappi Limited uses EBITDA margin (EBITDA expressed as a percentage of sales) as one of its key metrics to measure the success of our strategy and mission to be a trusted and sustainable company, setting 15 percent as our Group target. This year, to ensure global sustainability reporting consistency, SNA is moving to EBITDA margin as our prosperity measure.

In 2018, SNA achieved EBITDA margin of 8.8 percent, with strong selling prices for printing papers and dissolving wood pulp (DWP), largely offsetting the impact of extended downtime for the Paper Machine 1 (PM1) rebuild and higher delivery and input costs. At the Group level, we achieved 13.1 percent. Looking ahead to 2019, we will benefit from the major capital investments made at PM1 and the woodyard at Somerset. For a comprehensive discussion of our financial results for the year, please refer to the 2018 Annual Integrated Report at [sappi.com/2018AnnualReport](http://sappi.com/2018AnnualReport).

## People

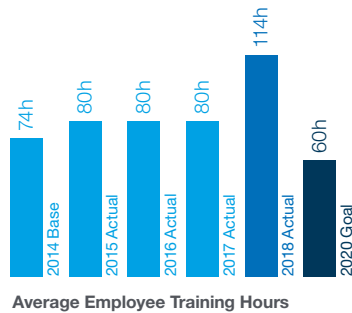


### Achieve zero workplace injuries

Safety is the top priority at Sappi North America. Internally, we are guided by our Project Zero initiative which sets a goal of zero workplace safety incidents. Lost Time Injury Frequency Rate (LTIFR) is one important measure for tracking work-related incidents resulting in injuries that reduce an employee's physical capabilities. It measures injuries resulting in lost time per two hundred thousand employee hours of exposure, equivalent to a hundred full-time employees per year.

In 2018, we achieved an LTIFR of 0.35, our best-ever reported performance. Of note, both Allentown and the Technology Center achieved zero workplace incidents. The Cloquet Mill posted a very strong performance of 0.26 LTIFR, putting it well within the top quartile of AF&PA reporting pulp and paper mills.





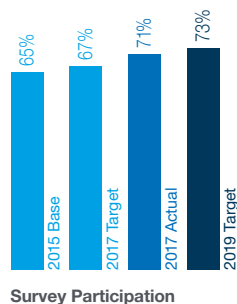
Average Employee Training Hours

## Achieve 60 training hours per year, per employee

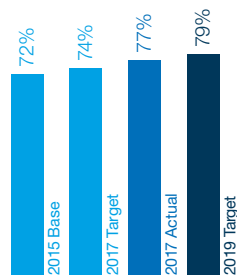
We continue our commitment to maintaining a skilled workforce in our complex business, and in 2018, we achieved an average of 114 hours of training per employee, which is well ahead of both the prior year and our goal.

Much of the training occurred in connection with the rebuild of PM1 at the Somerset Mill. The training programs included hourly and salaried personnel at the mill, in South Portland, at the Boston headquarters, and throughout the sales and technical services teams. The curriculum included the new equipment, new products, and provided an in-depth briefing on customer expectations and needs as we enter a new market segment.

We're hiring new employees at a high rate due to retirements, so it is critical to our success that employees continue to receive the appropriate level of value-adding skills and safety training.



Survey Participation



Sustainably Engaged Employees

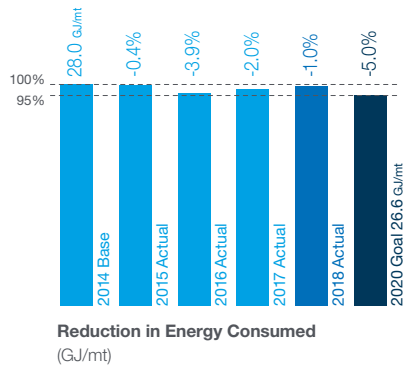
## Promoting employee engagement

Every two years, the entire Sappi Group undertakes the Willis Towers Watson employee engagement survey, from which we've established two metrics for employee engagement. Data from the 2019 survey will be available in the 2019 report.

With our 2015 baseline year in mind, we had a goal of increasing survey participation by 2 percentage points to 67 percent in the 2017 survey. We surpassed that goal with a 71 percent participation rate—a 6 percentage point increase.

We also had a goal of increasing our sustainable engagement (such as commitment to company goals, discretionary effort and recognition) by 2 percentage points to 74 percent. We surpassed that goal as well by reaching a level of sustainable engagement of 77 percent in 2017.

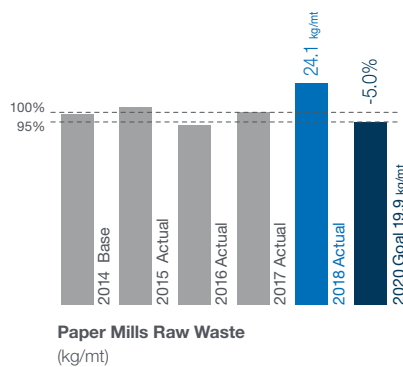
# Planet



## Lower total energy consumed

Energy use and climate change remain top of mind for Sappi, our customers, and our stakeholders. We've worked to control energy consumption, and continue to focus on this critical aspect of our operation.

Our goal is to reduce the total amount of energy expended per ton of product by 5 percent, as compared to the 2014 baseline. In 2018 our total energy use increased, primarily driven by the rebuild of PM1 at Somerset. We are on track to achieve our 2020 target, assuming improved efficiencies and output of PM1.



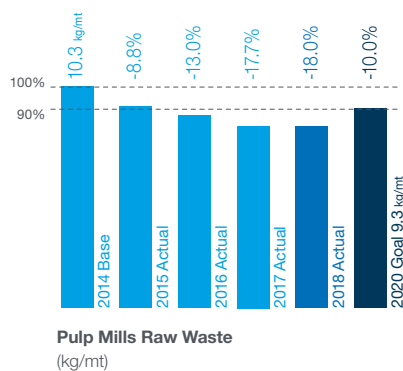
## Reduce raw material waste in our pulp and paper mills

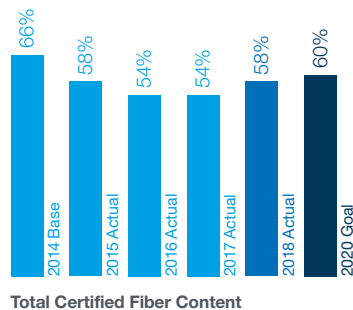
Efficient use of raw materials improves front-end cost savings, reduces environmental impact and lowers costs associated with waste processing. To achieve these benefits, we have separate goals for the pulping and papermaking process areas.

In our paper mills, we've established a 5 percent reduction goal, whereas our pulp mills are targeting a 10 percent reduction in material losses (which we measure in mill process sewers before these waste streams enter our on-site treatment plants).

The efficiency projects over the past several years continue to pay dividends, particularly at our Cloquet pulp mill. Once again, reductions have been achieved. This year the mills have accomplished a total reduction of 18 percent over the 2014 baseline.

Conversely, Paper Mill Raw Waste increased 15 percent from our 2014 baseline, which was driven primarily by our PM1 rebuild. We remain committed to achieving the 5 percent reduction by 2020.





## Achieve 60 percent certified fiber

Our certification goal tracks the amount of certified fiber from wood and pulp across our three manufacturing operations. All of Sappi North America's mills are triple certified in accordance with the leading global sustainable forestry chain of custody certification systems, including the Forest Stewardship Council® (FSC®-C014955), the Sustainable Forestry Initiative® (SFI®) program and the Programme for the Endorsement of Forest Certification™ (PEFC™).

In 2018, 54 percent of the wood and pulp sourced by our mills was third-party certified under SFI, FSC or PEFC standards with an additional 4 percent recognized as Point of Harvest certified. The total, 58 percent, is up from 54 percent for the last two years. Furthermore, 100 percent of Sappi North America's wood and pulp is sourced from well-managed forests and is third-party verified as originating from controlled and non-controversial sources via responsible procurement operations that utilize trained loggers and contribute to biodiversity, forest research, adherence to best management practices, and landowner outreach. All of the wood fiber that Sappi North America procures conforms to the SFI Fiber Sourcing Standard.

Our 2014 base year performance of 66 percent certified fiber—which was well above target—reflects that year's high use of purchased, certified kraft pulp for the Cloquet paper machines after the conversion of the pulp mill to produce dissolving wood pulp. At various times since 2014, we have swung to making more kraft pulp, the impact of which is reflected in the 2016 and 2017 annual certified fiber levels.

For more information on our third-party certifications, please visit [sappi.com/na-certifications](http://sappi.com/na-certifications).

# Prosperity

Meeting the needs of our customers is key to ensuring our prosperity goals are met. We balance a daily operational focus of sourcing wood, identifying improvements at our mills and fulfilling customer orders with a long-term view for expansion through investment in new markets, innovative equipment and groundbreaking technology. From 2010 to 2018, we strategically invested over \$500 million in assets to ensure that our customers receive the highest-quality products in the most sustainable manner.









“Key to our success as a sustainable growth company is our commitment to collaboration—among our employees, with our customers, and across the full value chain. It is the best way to innovate and make strategic investment decisions, ensuring our future prosperity, not just for the quarter or the fiscal year, but for the long term.”

**Annette Luchene**, Chief Financial Officer, Sappi North America

## Our journey continues

Sappi North America (SNA) takes a holistic stance on prosperity, understanding that a myriad of factors will define our financial success. This means always seeking answers—have we listened to our customers and made decisions in anticipation of their needs and expectations? Are all employees engaged and motivated to lead projects to execute their ideas? Do we understand how our operations impact our local communities and work with them to develop “win-win” strategies?

In 2018, much progress was made—starting with the rebuild of PM1—to meet customer demand for high quality, high bulk, and sustainable paperboard products. We also brought a state-of-the-art woodyard online at Somerset that reduces waste and improves our efficiency, and gained a new PM12 headbox at Cloquet that can now produce higher quality printing papers and packaging grades.

Lean Six Sigma (LSS) projects have engaged over two hundred employees this year, using resources and good ideas to improve our operations. We’ve tackled everything from faster ways to innovate product design, to improving steam use in our mills and optimizing mode of transport to lower cost and our carbon footprint.

We’ve expanded our community outreach to local dairy farmers in Minnesota, offering to supply our pulping byproducts to improve soil quality and reduce our own waste volume. We also worked with a local water district to measure and improve water effluent to their treatment system.

At Sappi North America, we understand that the best way for us achieve our goals is to listen, act, and always remember that our success depends on earning the trust of customers, employees, and our communities as well as our shareholders.

## 2018 financial performance

In 2015, when launching Sappi’s 2020Vision, we flagged 2018 as the transition year for the Group. The financial results for the year, both at the Group and North America level, reflect the impact of the strategic capital investments made, including production downtime. Group EBITDA was \$762 million, and SNA EBITDA was \$126 million, both in line with prior year performance despite the lost production time. Notably, sales of packaging and specialty volumes exceeded 1 million tons for the group, and total Group net sales were up 10 percent to \$5.8 billion. For SNA, packaging sales nearly doubled year over year, and excellent progress was made in qualifying the new paperboard grades. Overall financial performance was driven by tight graphic markets which lead to higher prices, as well as by higher prices for dissolving wood pulp (DWP), which offset the impact of higher input costs (particularly paper-grade pulp) and the production downtime. For a complete report of financial performance for the Group and for SNA, please refer to the 2018 Annual Integrated Report at [sappi-reports.co.za/reports/sappi-iar-2018/index.php](http://sappi-reports.co.za/reports/sappi-iar-2018/index.php).

Looking ahead to 2019, we are poised to take advantage of the transformative investments made this past year. We are committed to identifying further opportunities in our new markets for packaging and specialty papers, dissolving wood pulp and biomaterials. We will continue to develop innovative service offerings to support our printing papers business. As we embrace these new market perspectives, our prospects for sustainable growth have never looked better.



Annette Luchene, Vice President and Chief Financial Officer, Sappi North America.

## Sappi Limited recognized as a socially responsible investment

Sappi Limited is proud to earn a spot in the FTSE/JSE Responsible Investment Top 30 Index. The Socially Responsible Investment Index is a partnership between FTSE Russell, the global index provider, and JSE's work promoting corporate sustainability practices. Sappi Limited announced their inclusion in the index in July 2018.

Sappi has also been confirmed as a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

“With growing evidence of investors incorporating ESG issues into their investment decision-making, these achievements are highly positive for Sappi. At Sappi we believe that sustainable growth must emanate from a solid foundation where we do not focus exclusively on profits, but rather, balance our need to generate prosperity by promoting the interests of people while respecting the boundaries of the planet.”

**Graeme Wild**, Group Head Investor Relations and Sustainability, Sappi Limited



## Somerset Mill celebrates completion of PM1 rebuild

To meet customer needs for renewable paper-based packaging, we comprehensively rebuilt Paper Machine 1 (PM1) at our Somerset Mill in Skowhegan, Maine. In 2018, we completed the 16-month project, launching a broad range of high-quality paperboard products. Maine's governor joined Sappi management, local legislators, state officials, and members of the media to tour the rebuilt paper machine, see examples of the mill's new packaging products, and ask questions of the staff and Sappi officials at the event.

Tony Ouellette, Sappi North America Managing Director, explained that the investment establishes a strong platform for growth in paperboard packaging, allowing Sappi to bring new, innovative paper-based packaging solutions to the market. The rebuild increases annual production capacity at the mill to almost one million tons per year.

Mark Gardner, President and CEO of Sappi North America, credited the Somerset team for the significant investment being made there: "The main reason this site was chosen is the people we have here," Gardner said. "Somerset is a world-class mill, but at the end of the day, what will separate a winning company is the people."

"We see it as a major stepping stone for the future of the mill, and the future of the business here," Gardner continued. "We're really excited about the products we're getting off the machine."

Sappi was the first company to set the standard for coated paper, with roots extending back to 1854. Now, the company is setting the new standard in recyclable paperboard packaging. All the new product lines will have global availability and provide converters with superior color consistency, printability and downstream performance.

**"We see [PM1] as a major stepping stone for the future of the mill, and the future of the business here."**

**Mark Gardner**, President and CEO

Heather Pelletier, Sappi North America's Director of Packaging Brands, explained that the newly rebuilt machine moves Sappi into new paperboard grades. Products made from the paperboard produced on PM1 will include plates, cups, and take-out boxes. "PM1 will also produce luxury packaging products and folding carton applications, including high-end perfume boxes, packaging for women's makeup, fancy embossed boxes, and liquor boxes," she said.

Maine senators Susan Collins and Angus King issued a joint statement praising the investment: "It is critical that companies make long-term investments and pursue forward-thinking strategies to respond to changing market demands. Sappi has done just that with their recent investment and upgrades at the Somerset Mill in Skowhegan, which supports hundreds of jobs across Maine."

Governor LePage said the paper industry is reinventing itself and providing jobs for the future. Reflecting on his witnessing of the first paper machine coming to Skowhegan in 1982, the governor stressed the need to educate the next generation of mill workers, who will benefit from this investment.



## University of Maine and Sappi collaborate on new release paper application

New devices made from patterned release paper—for use in biotechnical applications—were included as one of five discoveries showcased at the University of Maine earlier this year, as part of their Maine Innovation, Research and Technology Accelerator (MIRTA) program. The innovative devices were developed in partnership with Sappi's Westbrook Technology Center.

MIRTA is a 16-week program that guides participants through customer discovery, market analysis, intellectual property analysis, and the development of a business model. MIRTA was made possible by the University of Maine System 2018 Research Reinvestment Fund—a pool of competitive internal grants allocated to advance research projects along the path from discovery to becoming commercial products with public benefit. All projects are tied to Maine businesses or industries critical to the future of the state.

Projects are selected for the MIRTA program based on high potential for successful commercialization as start-ups or licenses to existing Maine companies. Each project must develop a

commercialization plan with a strategy for bringing their research to market. Each team has an advisory committee of industry and technology experts who provide feedback and advice. The teams were eligible for up to \$25,000 each to help develop commercialization implementation plans.

The five showcased MIRTA projects included a radar-based beehive activity monitor to record the insects' movements to and from the apiary; a low-cost geoinformatics system to improve forest management planning; a beverage spoilage yeast test technology to deliver onsite microbe detection in wine and beer applications; a medical device for early detection and diagnosis of peripheral neuropathy; and the patterned-release paper devices for biotechnological applications, for use in healthcare and pharmaceuticals.

The release paper devices are designed to replace costly, non-biodegradable plastic or glass devices.



Photo courtesy of the University of Maine



# Innovating with our customers in mind



At Sappi, we are known for our history of paper innovation—but we don't stop there. This past year we've launched an unprecedented amount of investments and initiatives all to support our customers and business. With our portfolio of high-quality sustainable products, including our new paperboard packaging, along with our outreach and marketing efforts, Sappi is here to serve its customers for the long haul.

## Sappi educates on the power of paper

Our new site, POP from Sappi, celebrates the inspiring power of paper, print, and packaging.

POP from Sappi is a new educational site for marketers, creatives, designers and printers that features case studies, industry trends and insights, paper inspiration, and free resource downloads focusing on the impact of print in marketing communications. The name POP from Sappi was inspired by big ideas that empower Sappi's work—the Power of Paper, the Power of Print, the Power of Packaging—all fitting under a short acronym with a lot of punch: POP.

POP from Sappi is designed to provide these marketers with easily accessible information so that they have a go-to resource for those looking to make a greater impact in their marketing campaigns. POP showcases some of Sappi's most insightful projects in a dynamic and digestible way—demonstrating that print through sensory engagement and improved recall is essential to memorable brands.

## Sappi launches Verve brand

Building on its reputation for quality, service and responsibility, Sappi has moved to strengthen its leadership in the dissolving wood pulp (DWP) market with the launch of the truly sustainable Sappi Verve brand. In the past, DWP sold by Sappi was unbranded, and industry-generic names were used as product names. The new Sappi Verve brand creates a strong identity within the market, reflecting its unique benefits and inherent sustainability.

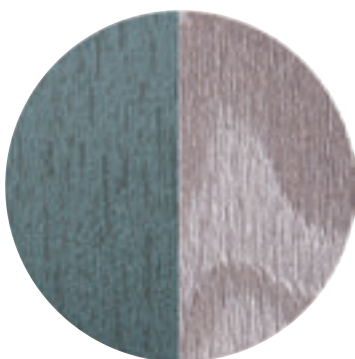
Demand for DWP continues to grow as consumer preference increases for products made from renewable, sustainably sourced and processed wood fiber. As a significant producer of DWP over the past decades, Sappi today produces close to 1.4m tons per year, earning a significant 16 percent share of the DWP market. Unlike fibers derived from non-renewable resources like fossil fuels, Verve is DWP used to create viscose and lyocell fibers for garments, home textiles and other applications such as pharmaceuticals and cosmetics. Sappi continues to invest in this market to meet customer demands for sustainably grown and responsibly processed DWP.



### Casting and release collaborates with customers on textures

To improve speed-to-market, volume potential and texture launch success rate, our Release paper sales team is engaging with customers, particularly in the decorative panel segment, to develop textures. By working together with customers in early-stage design, we are better able to capture near-term design trends and customer preferences that pay dividends in rapid-market adoption and brand owner specification.

In addition, Sappi Release textures provide a haptic experience that elevates the perceived value of the end product—offering unique surfaces that are differentiated from status quo products in the market. For decorative laminates, used for worktops and doors, Sappi Release paper helps to create the perfect blend of texture and printed décor for exceptionally authentic results.



### Introducing Sappi Packaging

Sappi North America announced the launch of its much-anticipated paperboard packaging line with two premier boards, Proto and Spectro, during Pack Expo International in Chicago on October 14th–17th, 2018. The new paperboards allow Sappi to provide luxury packaging and folding carton applications that complement its existing specialty packaging products. Sappi was the first company to set standards for coated paper, with roots extending back to 1854. For 165 years, Sappi has transformed the industry through cutting-edge, dynamic paper solutions. Now, using innovation to lead the way, it is setting the new standard in paper-based packaging by providing high-quality, cost-effective products. Both product lines provide a new choice for converters and commercial printers looking for innovative products and sustainable responsibility. Sappi will continue to expand its new paperboard product line to meet customer needs around the globe.

The two new paper-based packaging product lines to the market include:

**Proto:** A sturdy, solid bleached paperboard capable of meeting a breadth of applications from general folding carton and food packaging to pharmaceutical and over the counter packaging. It's the paperboard for everyday jobs, providing an unmatched yield advantage, and superior surface and printability for a lasting impact.

**Spectro:** A sturdy, solid bleached paperboard with enhanced optics, making it ideal for premium applications that call for dynamic and vibrant images.

Whether using UV, aqueous, or specialty coatings, hot foil stamping, embossing, special effects, or varnishes, Spectro has the surface for the most demanding applications.

## Heather Pelletier receives coveted CEO award

The Sappi Group Chief Executive's Award recognizes individuals who have demonstrated and lived out Sappi's values through exceptional efforts. Since 2013, we have recognized 21 colleagues across the globe for their contributions in line with Sappi's core values. This year, there were many strong nominations that showed a commitment to our One Sappi drive and 2020Vision. Sappi North America's award recipient, Heather Pelletier, was a clear choice.

Heather exemplifies Sappi's core corporate values of "doing business with integrity and courage, making smart decisions which are executed with speed." Through close collaboration across business functions and in coordination with our mills and supply chain, Heather achieved double-digit growth in profit contribution from our graphic web business. She accomplished this through a deep understanding of customer

requirements and market dynamics. In addition to her existing role, Heather eagerly embraced the opportunity to lead the rapid commercialization of both graphic and packaging grades after the significant PM1 rebuild investment at the Somerset Mill. This resulted in all grades being substantially commercialized before the start of the new financial year—setting up North America to enter the new fiscal year with our product transformation fully realized. Heather's dedication has helped ensure the success of this key project, as well as Sappi North America's continued growth in new markets.







Sheeting trim from Sappi's Allentown facility is recycled into other products.

## Reduce, Reuse, Recycle makes sound business sense

At Sappi, we believe in taking an integrated approach to value creation. We understand that the long-term sustainability of our business will only be ensured by delivering sustained value for our customers, community, employees and the environment. To be successful, we invest in our employees and our communities where we do business, and embrace the principle that reducing our environmental footprint makes sound business sense. As part of that commitment, we are dedicated to waste minimization across the supply chain—from the way we design our products and run our operations to the end of life of the products we deliver to our customers. “Reduce, Reuse, Recycle” are the tenets of our integrated approach.

### Reduce

Three of our five-year goals are centered on reducing waste, raw material waste in our pulp mills and paper mills and in the energy we use at those facilities. Reducing raw material waste not only relieves pressure on landfill disposal, but lowers costs and improves efficiency. Conservation measures and productivity improvements allow us to save energy and lower our greenhouse gas footprint.

### Reuse

By integrating flow loops into critical stages of our manufacturing process, we can capture and reuse excess material. For example, we utilize the byproducts generated on site (such as bark and black liquor) as fuels to create renewable energy to power our operations—a truly sustainable loop.

### Recycle

A wide array of materials are recovered, reused and recycled at each of our mills, including pallets, drums, light bulbs, electronic waste, batteries, cardboard, scrap metal, asphalt, packaging materials and more. Sheeting trimmings are recovered, and used as recycled content in our paper machines. Most of Sappi's products are recyclable and we encourage our customers, suppliers and community partners to promote recycling.

# People

Our social responsibility efforts focus on our customers, employees and our local and global communities. We engage with customers to inspire partnerships and create innovative products to keep our business moving forward. Across our operations, we focus on the safety, well-being and expertise of our employees—routinely working to connect and contribute in our local communities and beyond.









## Recruiting Sappi's future STEM leaders

At Sappi, we believe it takes great people to make great products. We offer many opportunities for rapid advancement and a culture that fosters innovation and creativity while positively impacting the communities in which we operate.

Our recruitment efforts begin at the high school level—talking to students about the value of Science, Technology, Engineering and Math (STEM) education, and how our industry can help support them with scholarships and co-op job opportunities.

College recruitment efforts are focused on schools near our mills, including the University of Minnesota, the Fond du Lac Tribal Community College in Minnesota, the University of Wisconsin, the University of Maine, Northeastern University, Rensselaer Polytechnic Institute, the University of Southern Maine, and the Maine Maritime Academy. We hold career fairs, provide tours of the mills, mentor engineering students, and offer financial support.

Sappi has supported the University of Maine Pulp and Paper Foundation since its inception in 1950, endowing a scholarship fund for engineers with a gift of \$100,000 in 2013. The foundation's programs encourage high school students to select STEM majors, provide full scholarships to select students, and offer internship and co-op positions for undergraduates. Former recipients of University of Maine Pulp and Paper Foundation scholarships are found at all levels of leadership across Sappi North America.

Co-ops are one of the most effective ways to introduce students to our company and culture. Students are hired for a 3- or 6-month term and perform their work like any other regular, salaried engineer. Lindsey Smith is one of many current Sappi employees who commenced her Sappi career as a co-op at the Westbrook Mill.



Brandi Couture, Superintendent of Coating Operations, Westbrook Mill



Lindsey Smith, Production Engineer, Westbrook Mill

Lindsey graduated from the University of Maine in 2016 with a B.S. in Chemical Engineering. During college she participated in a two-term co-op in the Classic Release Department at the Westbrook Mill and was hired back as a production engineer in the same unit after she graduated. Since beginning her career at Sappi, Lindsey has also been pursuing her MBA. “One of the things I love most about working for Sappi is the communal goal of continuous improvement,” she says. “The value put on process optimization encourages employees to think outside of the box, question the status quo, and strive for improvement. This creates an environment of continuous learning and endless opportunities.”

Sappi North America is a healthy and innovative company with a promising roster of STEM recruits poised to be our future leaders.

“One of the things I love most about working for Sappi is the communal goal of continuous improvement.”

**Lindsey Smith**, Production Engineer

# Employee engagement efforts

Because our employees are the glue that holds our organization together, maintaining a healthy, safe and engaged workforce is a priority at Sappi North America.

## Project Zero focus drives record-breaking safety performance

Thanks to the focus and dedication of every one of our employees, we achieved a Lost Time Injury Frequency Rate (LTIFR) of 0.35 for the year, the lowest in SNA's history. We maintain this momentum through daily safety communications throughout our mills. Front line leaders provide observations and corrective feedback on critical safe behaviors. We've revisited our Cardinal Safety Rules and emphasized incident reporting and early treatment for severity reduction. At all our manufacturing facilities, representatives from union and management leadership collaborate to drive safety improvements. We continue to invest in SafeStart skill building as part of our new employee orientation. All with the goal of achieving zero workplace injuries.

## Technical training at Cloquet to create a more skilled workforce

Sappi was recently awarded a grant from the Minnesota Job Skills Partnership to develop a pulp and paper technical program for a skilled workforce. The nearly \$400,000 grant will involve current and former Sappi personnel, educators from Fond du Lac Tribal and Community College (FDLTCC), University of Minnesota Bioproducts and Biosystems Engineering, and local high schools. The goal of this initiative is to systematically focus on developing educational materials for the incumbent workforce, two-year college students, interested FDLTCC students pursuing a Bachelor of Science degree as well as teachers and faculty from local high schools, community colleges and workforce development centers. The program will be implemented over the next three years, ensuring a healthy pipeline of talent for the Cloquet Mill.



Estefanie Franco, Marketing Communications Specialist and Sustainability Lead Ambassador.

## Improved employee health and wellness through education and awareness

A major component of our employee wellness philosophy is to provide prevention and education opportunities that promote a healthy lifestyle. At Sappi North America (SNA), our wellness program is effective because it is approachable and incentive based. Employees and their spouses enrolled in our medical plans can create a wellness profile with our medical insurance provider and schedule annual physicals and recommended screenings to earn gift cards, driving better employee knowledge of metrics such as blood pressure and cholesterol, which are key to maintaining a healthy lifestyle. Additionally, every site holds different events based on the needs and preferences of the employees—ranging from healthy cooking and equipment safety demonstrations, to free flu shots and mindfulness activities.

## Ambassadors deliver Sappi's sustainability commitment to communities

Our Lead Sustainability Ambassadors, a team of nine passionate leaders at sites around the country, work together to drive employee engagement through a variety of activities, whether it be organizing a volunteer event with a local charity, improving an onsite recycling program, or promoting educational opportunities. Working with Sandy Taft, ambassadors regularly meet to discuss ideas, share best practices, promote our sustainability story, and provide outreach to their local communities. Truly our “boots on the ground”, our Sustainability Ambassadors show how a career at Sappi can pay it forward in local communities.

### Sustainability lead ambassadors

- **Allentown:** Mark Wagner
- **Boston:** Estefanie Franco & Olga Karagiannis
- **Cloquet Mill:** Dan Menor
- **Sales:** Laura Brosius
- **Somerset Mill:** Mark Barnes
- **South Portland Office:** Mary Buckelew
- **Technology Center:** Rachel Kaul
- **Westbrook Mill:** Lisa Patterson





## Sappi awards Girl Scouts with unique Paper Scientist Patch

To encourage girls to pursue fields in Science, Technology, Engineering and Mathematics (STEM), several Sappi employees worked with the Girl Scouts of Maine to develop a first-of-its-kind Girl Scout Paper Scientist Patch. It was awarded to 15 Girl Scouts from Troop 574 in Westbrook, Maine and Troop 2070 in Gorham, Maine.

Girls earn their patch by learning about paper and paper products; trees and sustainable forestry; and sustainable consumption, including the elimination of wasteful use, paper recycling and reuse. The girls who received their patch attended a Papermaking Patch Expo at the Westbrook Technology Center, where they got their hands dirty making pulp, used an electron microscope to look at paper coatings, and made “trash-to-treasure robots” adorned with plenty of glitter.

Mary Buckelew—Inside Sales Manager, National Accounts based in Sappi’s South Portland office and instrumental in making the patch happen—is a Girl Scout leader whose daughter is in among the troops. “My daughter, and all the girls, are so proud to be among the first to earn this special badge through their hands-on science learning,” she says. “But we hope to expand the program, first in Maine, then in Minnesota, and then nationwide—or even globally.”

“My daughter, and all the girls, are so proud to be among the first to earn this special badge through their hands-on science learning.”

**Mary Buckelew**, Inside Sales Manager,  
National Accounts



# Community and Employee Relations Committee (CERC)

At Sappi's Boston headquarters, CERC engages employees in volunteer activities that encourage relationship building and teamwork, create positive impacts in their local communities, and promote Sappi brand awareness in three main pillars:

**Sustainability:** Every year the committee partners with the Charles River Watershed Association to pull water chestnuts, an invasive plant, from the Lakes District of the Charles River in Newton.

**Youth/Education:** For the past 18 years, in conjunction with the Massachusetts Department of Children and Families (DCF), CERC has sponsored several underserved families in the area during the holiday season. Employees purchase clothing, toys, and other items for these families.

CERC also hosts a Career Exploration Fellowship with Codman Academy, a public charter school located in Dorchester, MA, allowing rising high school juniors or seniors to explore careers in the fiber resources industry.

**HIV/AIDS Awareness:** CERC supports the AIDS Action Committee (AAC) of Massachusetts, New England's oldest and largest AIDS service organization. For the past 15 years we have co-sponsored an online silent auction where we have raised over \$336,000.



Blair Campbell, SI Business Process Engineer and CERC member, harvesting invasive water chestnuts on the Charles River.





Thanks to an EITM grant, Dale Leroux and Don Davidson fulfilled a lifelong dream of creating a children's book focused on diversity and inclusion.

## Sappi grant publishes children's book on diversity and inclusion for Westbrook schools

Through the Employee Ideas that Matter program, Sappi employees bring their charitable ideas to life. Employees apply for direct funding to the nonprofit organizations that they are most passionate about, and the winners share \$25,000 in corporate giving to support their selected causes. Funding can be used in many ways—from financing a project, sponsoring a trail cleanup, or providing new equipment or supplies.

Dale Leroux and Don Davidson fulfilled a lifelong dream of creating a children's book focused on diversity by writing *The Rainbow Rescue* more than 20 years ago. The book was never published until this year, when Sappi provided an Employees Ideas that Matter grant to the Westbrook Maine Children's Project to publish 500 copies of the book. Sappi also donated the paper for the printing.

The Westbrook Children's Project is a program of the United Way of Greater Portland that brings community resources together to help children through their school years. The Project donated 300 copies of *The Rainbow Rescue* to the Westbrook Maine Community Center and Westbrook schools. Each fourth-grade student in the Westbrook school district will receive a copy. Additional copies will be donated to other school libraries in the area.

*The Rainbow Rescue* tells the story of a witch who uses her power to drain all color from the village of Uppygoo. "I was trying to teach my then-young daughters about inclusion, acceptance and not judging a person by the color of their skin," Dale says. "We wanted to create a story that said it is okay to be different," Don added. The book tells a heartwarming story with an important message about diversity and inclusion.

Dale, who is a Quality Tester in Ultracast at Sappi's Westbrook Mill—and also works as an editorial cartoonist at a local newspaper—drew the illustrations for the book. He came up with the idea of creating a children's book in 1995 and reached out to Don who wrote the text. Don, his friend and co-worker of 36 years, retired from his position as an Ultracast Coater in 2016.

Although written and copyrighted over 20 years ago, the story's themes of acceptance and diversity are timeless and relevant to the Westbrook community. Dale and Don chose to share the story in print rather than digital form, noting that the book printed on Sappi's best printing paper ideally shows off the color and "pop" of the illustrations, providing a more tangible and appealing channel to reach the children who will read it. Dale and Don created handmade copies of their book years ago for their own children and grandchildren, but this project provides an opportunity to formally publish their work and share it with a larger audience for the first time.

## Living Lands & Waters cleans up rivers with Sappi's help

Sappi proudly supports Living Lands & Waters, an Illinois-based environmental organization that was established in 1998 to clean trash and debris from America's rivers. It has since grown to be the only "industrial strength" river cleanup organization of its kind in the world. Spending up to nine months a year living and traveling on a barge, the Living Lands & Waters crew hosts river cleanups, watershed conservation initiatives, workshops, tree plantings and other key conservation efforts.

As the organization celebrates its 20th anniversary, they are reaching a milestone—having pulled nearly 10 million pounds of trash from US waterways along 24 rivers in 21 states.

Living Lands & Waters has received many awards and accolades, including honoring the organization's founder and President Chad Pregracke as the 2013 CNN Hero of the Year, followed by his selection as a 2016 CNN Superhero—the best of their Heroes selected over a five-year period. Mr. Pregracke founded the organization at the age of 23. He has since grown it to include a full staff and fleet of equipment, cleaning river banks along the Mississippi, Illinois and Ohio Rivers, as well as many of their tributaries.

Sappi gladly supports Living Lands & Waters through a corporate partnership where our employees participate as volunteers at river cleanups.

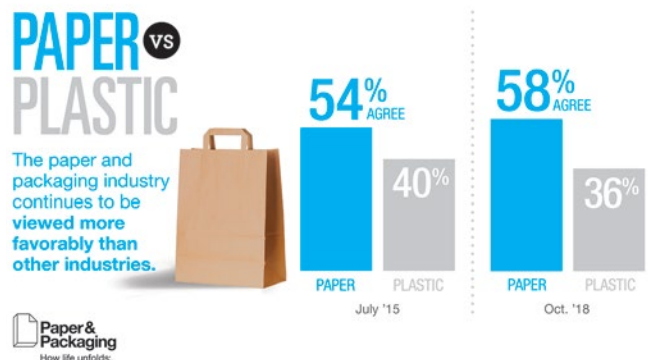
## Paper and Packaging—How Life Unfolds

Sappi is proud to support national consumer campaign, Paper & Packaging—How Life Unfolds®, alongside more than 40 paper and packaging organizations. The campaign highlights how paper and packaging enhance business and personal productivity, creativity and learning, and helps protect and deliver the goods we need.

Thanks to the effectiveness of the campaign, attitudes towards the industry's products are trending positive. Eighty-one percent agree that even as technology becomes more advanced, paper continues to play an important role, and 75 percent agree that paper-based product packaging is an essential part of everyday life<sup>1</sup>. Jennifer Miller, Chief Business Sustainability Officer at Sappi North America, has been a member of the board since its inception and was elected Chair for 2019.

While attitudes are positive overall towards paper products, news coverage about waste and climate change escalated in 2018, adding to consumer uncertainty about the environment and material waste of all kinds. The good news is that the Paper and Packaging Board's research shows

the campaign's target audience believes the benefits of paper outweigh the environmental concerns, especially when compared to other materials.<sup>2</sup> As a result, the campaign's messages about paper and packaging's role in everyday life has never been more important. Follow along at [HowLifeUnfolds.com](http://HowLifeUnfolds.com).



1 Consumer Tracking Survey. Isobar, April 2018. © Paper and Packaging Board.

2 Consumer Tracking Survey. Isobar, October 2018. © Paper and Packaging Board.

# Ideas that Matter

For the past 19 years, Sappi has empowered great ideas by supporting designers that use their time and talent for good. Since the inception of the Ideas that Matter program, Sappi has donated over \$13 million in grants to support more than 500 charities. Sappi is giving back by encouraging local initiatives and making a difference in communities around the United States and around the world.



## Prosperity Gardens in Champaign, Illinois

The Prosperity Gardens organization provides hands-on, garden-based education and green business employment opportunities for the Champaign-Urbana community. They cater to the city's low-income residents by growing affordable, nourishing produce from two city-owned lots and a new one-acre urban farm site. By supporting urban neighborhoods trapped in "food deserts," Prosperity Gardens is dedicated to cultivating healthy communities in all capacities.

Prosperity Gardens has expanded services with the help of Mark Taylor and Natalie Smith from the University of Illinois Department of Art and Design, as well as Eric Benson, CEO of the design firm Re-Nourish. They have designed and developed new signage, packaging, merchandise and experiential items that provide employment opportunities in agricultural sciences and food production for teens seeking a new direction in life.

With the support of Sappi's Ideas that Matter grant, the design team and Prosperity Gardens produced 400 copies of a recipe book featuring vegetables grown by the community. The engaging design and easily accessible recipes in the book will help community members learn new ways to cook and enjoy seasonal vegetables. In addition, by promoting the use of home composting, the book is helping Prosperity Gardens influence how people shop, cook, and reduce what goes into landfills—supporting Sappi's mission of sustainability.





### ProPublica 'Factivism' fundraising project

Despite the ever-changing media landscape, direct mail remains a powerful driver of conversions. ProPublica, a nonprofit newsroom, recognized the need to reach new and longtime donors by addressing concerns about fake news and alternative facts. To meet that need, ProPublica created a campaign that was made possible by an Ideas that Matter grant from Sappi North America, allowing them to raise over \$500,000. In 2017, the newsroom sent printed pieces by direct mail that implored recipients to keep investigative journalism alive, calling this movement "Factivism."

ProPublica partnered with Naomi Usher, Creative Director at Studio Usher, to create the stunning direct mail donation campaign—and it worked. ProPublica saw an uptick of 30,000 donors in 2017, and wanted to maintain the momentum. The organization needed to find a way to encourage these donors to continue to give to their efforts in 2018, so they adopted a multi-channel fundraising approach. They decided to use a high-quality direct mail appeal to two important groups of new donors, in conjunction with email and social media where possible. The high-quality coated printing papers and eye-catching design of the direct mail campaign made an emotional impact in a way other marketing simply couldn't replicate. The results speak for themselves.



### Riverside Arts Center in Ypsilanti, Michigan

The Riverside Arts center in Ypsilanti, Michigan was transformed into a vibrant community arts hub thanks to the work of Leslie Atzmon, Ryan Malloy, and intermediate graphic design students from the Eastern Michigan University School of Art & Design. Together, these volunteers rebranded the center through environmental graphics, promotional material and fundraising efforts.

Serving a diverse community in the greater Midwest of the United States, the Riverside Arts Center promotes and nurtures dynamic cultural programs through arts education, performing arts, visual and fine arts. By tapping into the creative ideas and outcomes from the Sappi Ideas that Matter grant, they were able to apply for other grants from funders such as Ann Arbor Area Community Foundation, Blue Cross Blue Shield, Buhr Foundation, DTE Energy Foundation, the Michigan Council for the Arts and Cultural Affairs and many others. At the end of 2017, Riverside Art Center had a surplus of \$50,000 due to their enhanced fundraising efforts.

## Sappi mentorship program offers growth opportunities to young foresters

Lucas (Luke) Lamond grew up in the forestry business working in the woods with his father, a consulting forester who taught him everything about forest management. Luke is a graduate of the University of Maine in Orono with a degree in Forest Operations, Bioproducts and Bioenergy. In 2014 he was awarded the College of Forest Resources' Dwight B. Demeritt Forestry Award, which is issued to recognize the top students in forest resources and wildlife.

Even with Luke's impressive background, he had a steep learning curve when he came to Sappi. Luke's roots were in rural Maine, where logging and timber harvesting are a way of life, and most land-owners own large tracts of land that they hold as working forests. Luke, however, was going to work in the more urbanized southern part of the state, where forestry operations are not as well understood by the public.

Julie Davenport's father is also a forester, but she had no intention of following in his footsteps. "I didn't spend much time in the woods with my Dad growing up. I knew what a skidder was, but not much else," she says. Nonetheless, in college,

Julie found forestry more interesting than her original field of study, and she now holds a degree in forestry from the University of Maine. In college she served as the President of Xi Sigma Pi, the international forestry honor society, was a pole climber on the Woodsmen's Team and worked for the Maine Forest Service during summers and her final year of school. Prior to coming to Sappi, Julie worked in wood procurement at a paper mill in western Maine. Similarly, her initial role as a forestry technician for Sappi proved challenging, with so much to learn.

Both Luke and Julie were the beneficiaries of Sappi's mentorship program that provides on-the-job training to new foresters to gain experience and develop the skills to be a successful forester. Only a portion of the job skills and understanding of the complexity of sustainable forest management is taught in forestry school, according to Charlie Hall, Manager of Sappi's Forestry Program in Maine. "It takes 5-7 years of working in the field to gain the experience and build the confidence necessary to solidify your role as a procurement forester," he says.



Luke Lamond, Forest Technician, participated in Sappi's forestry mentorship program.



## Complexity of the job

The job of a Sappi procurement forester has many facets. The forester must have a thorough understanding of silviculture to improve the health of the forest: Which trees should be removed to spur growth of the residual forest, which should be kept as seed trees or to provide even distribution of age classes? He or she also needs to understand business fundamentals and market conditions.

There are wildlife and biological considerations: What is best to preserve habitat for deer or cottontail rabbits? Are there endangered species that need protection?

Environmental considerations are always paramount: How does the forester best protect water quality and minimize any runoff or rutting issues? Should the land only be harvested in the winter when the ground is frozen, or in the summer and fall when it is drier? Do roads and landings need to be cut before the harvest begins so they can freeze or dry out before the introduction of heavy equipment? Which equipment is right for the job, and is it available when needed? Are all the needed permits in place before harvesting begins?

The forester needs to have answers to these questions and more—but he or she must also be able to convey the information to the landowners, loggers, abutters, and the public. An effective forester builds relationships and trust, and has the confidence to move forward with the development and implementation of a management plan, while maintaining the ability to adjust that plan when conditions change. It is not possible to have a full grasp on all of this as a recent graduate just entering the job market.

## Working under seasoned procurement foresters

Luke started with the Sappi forestry team in 2015, initially working as a forestry technician under Paul Larrivee, Sappi's Senior Procurement Forester for southern Maine, who has been a licensed Maine forester since 2001. Luke then worked under Forest Briggs, Sappi's Procurement Forester in central Maine, who has been working as a timber harvester, forester, wood scaler, and realtor since graduating from the University of Maine in 1997 with a degree in Forest Management.

Julie worked for two years under Bryan Savoy, recently promoted to a Senior Wood Procurement Manager position at Sappi, who has been an operations and marketing forester and has supervised logging crews and merchandising yards since he graduated from the University of Maine in 1997



Julie Davenport, Senior Wood Procurement Manager, participated in Sappi's mentorship program.

with a B.S. in Forestry. Julie then worked for Pete Foss, who worked for Sappi and Scott Paper for 43 years, most recently as a procurement forester, until retiring in 2018.

Luke became a licensed forester in Maine last year and was promoted to a Sappi forester position in the summer of 2018. He now works with landowners throughout Penobscot and neighboring counties in Maine. Julie is now a licensed forester in the State of Maine and was promoted in October 2018 into a forester position at Sappi covering southern Somerset and Kennebec Counties. In working with experienced foresters, Julie and Luke have each developed their own approach to working with landowners.

Sappi's mentorship program was lauded as a Best Practice by Brian Callaghan, Lead Auditor for Bureau Veritas Certification, during a recent third-party forestry certification audit of Sappi's forestry practices.

# Planet

We approach environmental responsibility holistically, carefully considering raw material use, energy generation, manufacturing and the expiration of our products. We believe this mindset ensures that natural resources are preserved and promotes the health and wellbeing of our employees, communities, and customers.



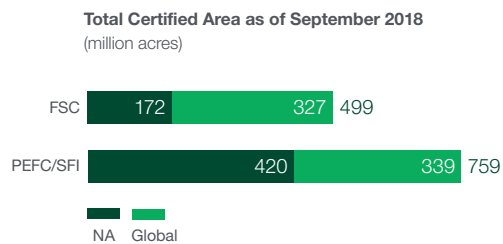








## Responsible wood and fiber sourcing



Source: Data from public websites.

Responsible manufacturing begins with responsible sourcing. In the US, a strong legal framework has instilled responsible forestry practices for generations. The Clean Water Act first established the requirement for best management practices (BMPs) in the 1970s. BMP's are adopted at the state level and are evaluated and revised over time by each state. Third-party forest certification standards have led to additional improvements and provide a scalable assurance mechanism for stakeholders.

For more information on third-party forestry certification programs, please visit:

- Forest Stewardship Council (FSC), [fsc.org](http://fsc.org)
- Programme for the Endorsement of Forest Certification (PEFC), [pefc.org](http://pefc.org)
- Sustainable Forestry Initiative (SFI), [sfiprogram.org](http://sfiprogram.org)

## Forest certification and holistic sourcing assurances

The amount of certified forest varies significantly by country and region. North America is home to over one-third of FSC-certified land globally and over half of the world's PEFC-certified land. Approximately 20 percent of US timberlands are third-party certified, with the percentage of uncertified forests largely comprised of private (often small holders) and federal ownership where the costs and process of administering forest management certification are overly burdensome. The only certification program that has experienced consistent growth in acres certified since 2010 is SFI (see the chart below).

Because of the restricted availability of certified forest fiber, nearly all supply chains use a blend of certified and uncertified fiber. To maintain the highest levels of assurance without chain of custody claims, the leading global standards have instituted additional control measures for fiber from uncertified lands: SFI has the Fiber Sourcing Standard and FSC the Controlled Wood Standard. Both standards are separate from Chain of Custody standards, and both standards require avoidance of controversial sources.

The SFI Fiber Sourcing Standard requires that we meet several measurable objectives including:

- Landowner Outreach to broaden the practice of sustainable forestry by forest landowners through fiber sourcing programs, public outreach, education and involvement in SFI Implementation Committees
- Use of Qualified Resource and Qualified Logging Professionals to broaden the practice of sustainable forestry by encouraging forest landowners to utilize the services of forest management and harvesting professionals
- Adherence to Best Management Practices (BMPs) to broaden the scope of sustainable forestry using best management practices to protect water quality

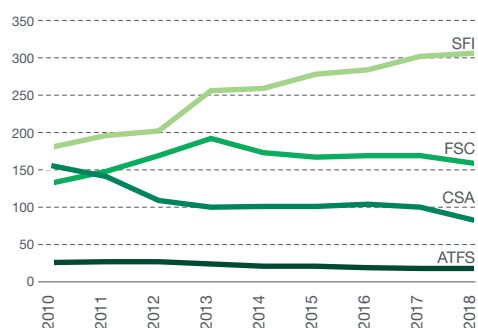
- Investment in Forest Research to invest in forestry research, science and technology, upon which sustainable forest management decisions are based
- Measures to Broaden Biodiversity to address the practice of sustainable forestry by conserving biological diversity

The FSC Controlled Wood standard is designed to eliminate the presence of controversial sources. There are five categories of unacceptable material that cannot be mixed with FSC-certified materials:

- Illegally harvested wood
- Wood harvested in violation of traditional human rights
- Wood harvested in forests in which high conservation values (HCVs) are threatened by management activities
- Wood harvested in forests being converted to plantations or non-forest use
- Wood from forests in which genetically modified trees are planted

We can assure stakeholders that 100 percent of our forest fiber is from a well-managed forest, at low risk of any controversial sources.

**Forest Management Certification in North America**  
(million acres)



Note:  
Canadian Standards Association® (CSA®)  
American Tree Farm System® (ATFS®)

Source: Data from public websites.





Paul Larrivee leads a tour of the Falmouth Community Forest after the harvest.

## Improved wood fiber procurement policies

In 2018, the Sappi Group updated its Woodfibre Procurement Policy to set clearer parameters for our wood, chip and pulp procurement operations as well as to establish clearer direction to our suppliers. The policy requires that all wood and pulp sourced for Sappi globally must come from well-managed forests and be third-party verified that it is from controlled and noncontroversial sources. The policy reflects Sappi's inclusive approach to support all three of the leading international forest certification systems, namely the FSC, SFI and PEFC programs. The amended Group Policy achieves a balance of environmental, social and economic values in a manner that promotes forest health and supports community well-being. Please visit [sappi.com/GroupFiberPolicy](https://sappi.com/GroupFiberPolicy).

Sappi North America's Sustainable Forestry Policy was also strengthened in 2018 under the leadership of our new Forest Certification Manager, Rebecca Barnard. SNA's procurement practices extend far beyond avoidance of controversial sources by requiring the promotion of biodiversity, logger training, forest research, landowner and community outreach, and implementation of best management practices for soil and water conservation, as evidenced by our conformance to the SFI Fiber Sourcing Standard.

# Sappi's integrated, community-oriented approach to forestry

Forest management and harvesting can be contentious and controversial, especially when done in a densely populated area or on public lands that are cherished for their serenity, recreational opportunities, and conservation values. At Sappi, we believe that the right approach when managing timber is to integrate forest management—especially timber harvesting—into the local culture by sharing information and collaborating with local communities and the public, as showcased in these three coastal Maine harvests.

## Dodge Point Preserve

The Dodge Point Preserve, owned by the State of Maine, boasts an extensive trail system leading to spectacular views along the Damariscotta River in Mid-Coast Maine. Towering plantation red pine still dominates much of the forest landscape and the State continues the longstanding tradition of careful timber harvesting at regular intervals. Sappi Forestry has been contracted by the State to manage this winter's harvest at this popular site.

Working with foresters from the Maine Bureau of Public Lands, as well as the Damariscotta Land Trust, Paul Larrivee, Senior Procurement Forester for Sappi, prepared a harvest plan for this upcoming winter which included holding public informational sessions before any work began with all abutters, inviting them to discuss the plan and identify any concerns.

## Beatrice B. Baxter Memorial Forest

Paul Larrivee led a similar community-oriented approach to harvesting on state and town-owned land in Topsham, Maine. In 1969 John Baxter gifted a 125-acre tract of land to the State under the stipulation that it would be managed by the State for high-quality timber and be used to demonstrate exemplary forest management. The Sappi Forestry team was contracted by the State to help conduct a harvest to meet John's wishes.

The harvest was designed to enhance a multi-aged timber stand, thin the forest to remove dead material, improve health, promote the growth of high-value pine and oak, and preserve the existing wildlife habitat.

In January 2018, Paul and Sappi Forestry team member Nate Gould oversaw a timber harvest of the forest, working in cooperation with foresters from the Maine Bureau of Public Lands.

## Town of Falmouth Community Forest

The Town of Falmouth, Maine, has more than 2,000 acres of open space available on 29 individual land parcels. The area was heavily farmed until the early 1900s, when the farms were abandoned—quickly reverting fields to forest. Forestry operations are prohibited on much of Falmouth's open space land, but Bob Shafto, the town's open-space ombudsman, worked with the community to select Paul to develop a harvest plan that fit with the town's vision, allowing commercial harvesting in selected areas, all the while protecting the wildlife habitat and improving the overall health of the forest.

The resulting harvest generated enough cash to pay for forest improvements and provide funds for the trail work and maintenance. Town officials and residents enjoying the trails and the forests now understand the value of forest management thanks to Sappi's community-oriented approach.



Sandy Taft, Director of Sustainability (left) and Kraig Melin, Technical Manager of Paper (right).

## Energy and emissions

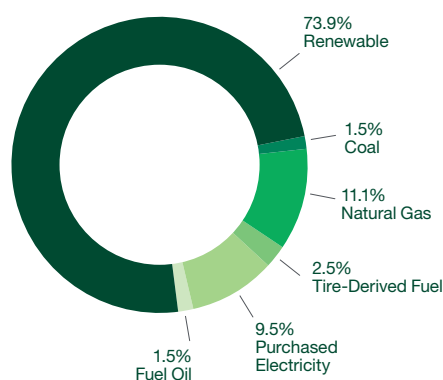
The Pulp and Paper sector is energy-intensive. In 2017, the US Energy Information Administration (EIA) ranked the paper sector as fourth in energy intensity behind the Refining, Iron and Steel, and Cement and Lime sectors. However, the Pulp and Paper sector is one of the lowest industrial sectors for CO<sub>2</sub> emissions due to the availability of carbon neutral fuels such as woody biomass and black liquor. According to the American Forest & Paper Association (AF&PA) 2018 sustainability report, on average, about 66.6 percent of member energy demand is met through renewable biomass energy. Sappi's mills derive nearly 74 percent of their total energy from renewables (including renewable purchased electricity) as well as another 2.5 percent from alternative fuels such as tire-derived fuels.

We identify climate change as a strategic trend that is shaping our business, as do many of our customers. There is a role for Sappi North America to address climate-related issues, not only in how we operate mills, but also the way we manage our use of forest resources. While our focus to date has been on the mills, there may be opportunities for collaboration with scientists and other businesses, including customers, to ensure that the way we manage our mills and forests is done so with a greater emphasis on climate mitigation and sequestration. Solutions will need to be measurable, and operationally and economically sustainable. Setting goals, such as science-based targets or greater engagement with policymakers are possible paths forward and worthy of greater analysis. In 2020 we will be releasing our next set of five-year goals and assessing our approach to climate action.

“After spending the last 10 years focusing on climate mitigation and resiliency strategies in the energy sector, I am excited to turn to the wood products industry where there is the possibility to develop new and complementary strategies.”

**Sandy Taft**, Director, Sustainability  
Sappi North America

Sappi NA Total Energy by Source





## Cloquet's effluent removal project reduces waste and cost

Being sustainable means constant renewal and continuous improvement. At Sappi North America, we view waste reduction and efficiency improvements as a critical and ongoing part of our sustainability strategy. One of the approaches that has been very successful is using Lean Six Sigma (LSS) tools to identify solutions and drive process improvements. LSS projects have engaged over two hundred employees this year, with Sappi putting resources towards their good ideas to improve the way we operate—tackling everything from accelerating innovate product design, to improving energy use in our mills. A particularly successful project in recent years is the reduction of effluents in waste water discharged from the Cloquet Mill to the local water treatment system.

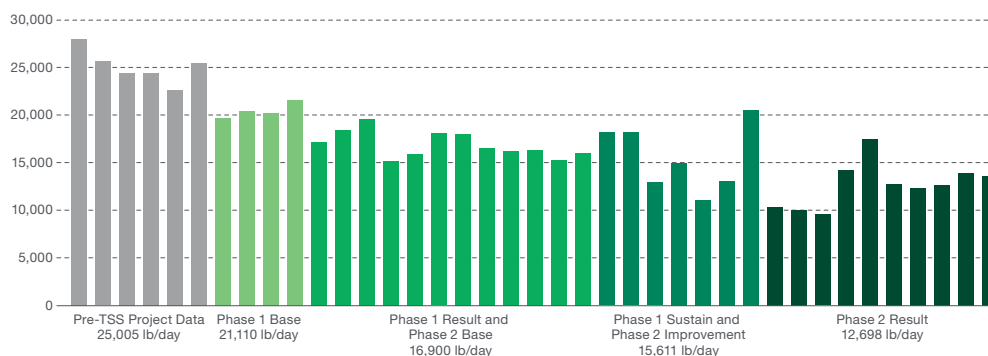
Cloquet uses two primary treatment clarifiers to remove solids from its pulp mill and paper mill effluent. After most of the solids are removed in these clarifiers, the effluent wastewater is sent via pipeline to the Western Lake Superior Sanitary District (WLSSD), the local publicly owned treatment facility in Duluth, MN, for final treatment. WLSSD charges treatment fees to the mill based on the amount of biological oxygen demand (BOD), total suspended solids (TSS), and flow that is delivered to their treatment plant.

These reductions have come from a two-phase TSS reduction project. The first phase of the project, team members Kyle Morberg, Frank Pengal, Robert Schilling, Keith Matzdorf and Clint Treichel focused on the paper mill clarifier, introducing a coagulant to the clarifier at variable rates based on inlet turbidity. This reduced effluent TSS from about 21,500 pounds per day to approximately 16,900 pounds per day.

In the second phase of the TSS reduction project, team members Kyle Morberg, Frank Pengal and Bill Lahmayer focused on the pulp mill, stabilizing the pH and reducing the effluent TSS from approximately 16,900 pounds per day to 12,900 pounds per day.

The TSS reduction from Sappi had an additional environmental and financial benefit. The WLSSD can now more easily comply with their own final effluent limits, which may allow them to avoid a future capital expense. These costs would have been passed along to the local community that uses the WLSSD, including Sappi.

**Effluent Total Suspended Solids Monthly Average (2015-2018)**







# Key performance indicators

Each year we survey our performance in important areas of environmental and social responsibility by monitoring key metrics for fiber, emissions, energy usage and the impact of our operations on air, water and solid waste. We use this data to set improvement goals for our operations and interactions with key stakeholders.



## Energy

Renewable energy continues to be the dominant source of energy at our three mills as indicated in the three pie charts. In 2018, our total onsite renewable energy use consisted of Black Liquor, 60.7 percent; Biomass, 38.1 percent; and Sludge, 1.2 percent. The bar chart shows the percent of renewable energy for the last five years for comparison purposes. Purchased electricity also includes a renewable contribution and we benefit from the commitments of our regions to increase the amount of renewable energy in the market.

Other sources of energy are comprised of alternative fuels and fossil fuels. Both are noted on the pie charts. Alternative fuels (waste that rather than being landfilled or disposed of are repurposed) are also noted on the pie graph and include Tire Derived Fuel (TDF), Waste Oil, and Construction and Demolition Debris. Fossil fuels predominantly include the use of natural gas, but also some coal and fuel oil.

In order to monitor our commitments to energy efficiency we track Energy Intensity, as illustrated in the bar chart. We define Energy Intensity as the total energy consumed to produce a set unit of product. Total energy is measured in gigajoules and is determined by fuel use and corresponding records. Unit of product is measured in air-dried

metric tons (admt) and is the saleable product manufactured during the year, including market pulp. In order to achieve our current five-year goal to reduce energy consumption per ton of product by 5 percent, operators manage fuel usage in the steam and power generation systems at each of our mills to optimize production and cost efficiencies. Energy intensity for 2018 was negatively impacted by the rebuild of Paper Machine 1 (PM1) at Somerset.

**Sappi ensures consistency and accuracy of environmental metrics through a global team (E4 cluster).**



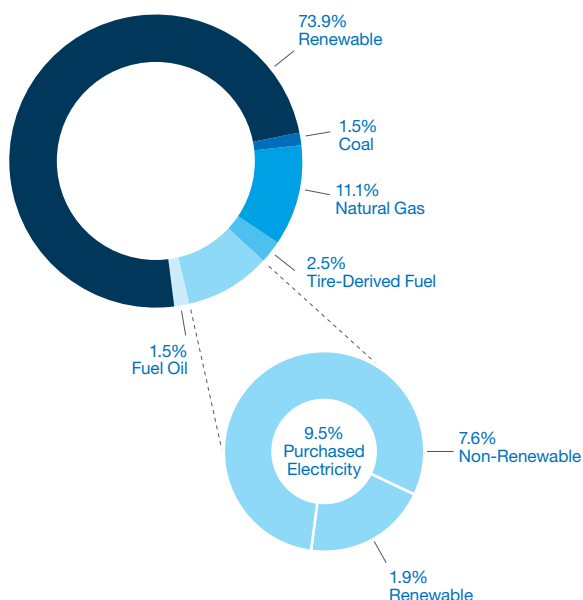
**Rob Schilling**  
Environmental Manager  
Cloquet Mill  
E4 Cluster



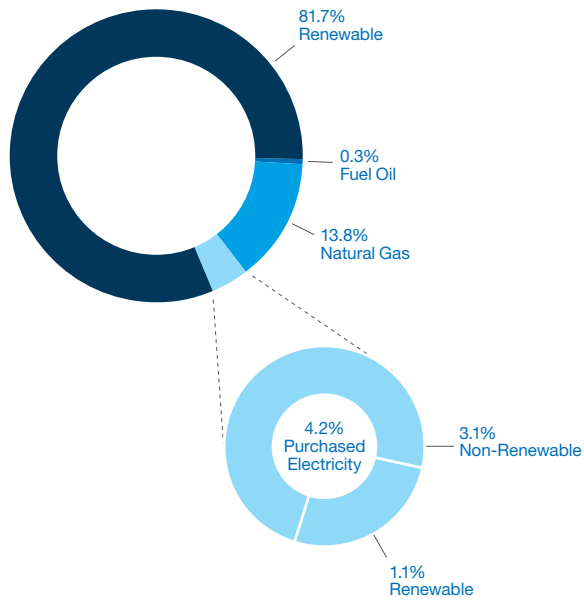
**Chuck Qualey**  
Senior Engineer  
Somerset Mill  
E4 Cluster

Note: Analysis of our energy use employs a calculation method also used by the Department of Energy and the AF&PA. In this method, energy consumption from purchased electricity is calculated in terms of fuel inputs to account for different fuel efficiencies during power generation and efficiency losses during power transmission.

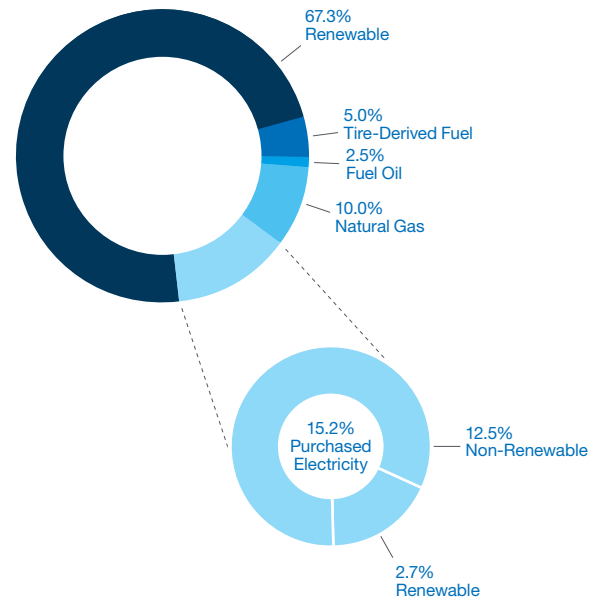
### 2018 Sappi North America total energy



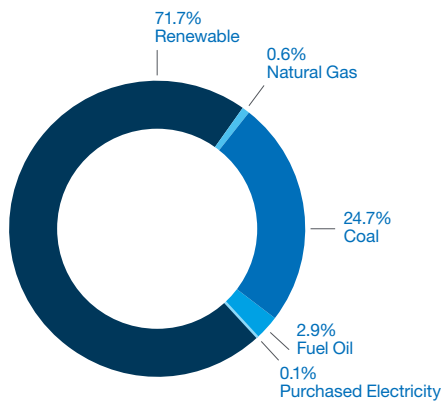
2018 Cloquet Mill total energy



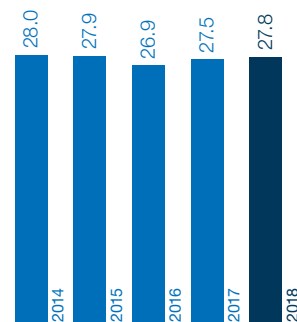
2018 Somerset Mill total energy



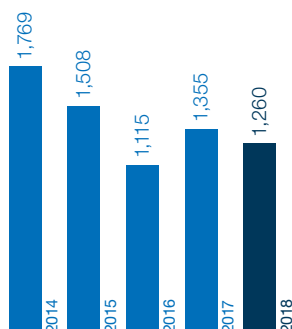
2018 Westbrook Mill total energy



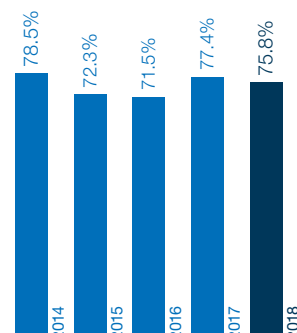
Sappi North America energy intensity (GJ/admt<sup>a</sup>)



Consumption of alternate fuels (TJ/yr)



Percent of renewable energy<sup>b</sup>



a Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).

b 2017 was corrected and the percent of renewable energy was lowered from 79.2% to 77.4%.

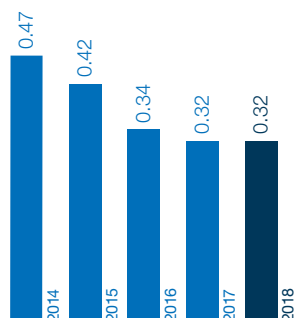
# Emissions

Particulate emissions stayed flat whereas NO<sub>x</sub> and SO<sub>2</sub> emissions both went down slightly, reflecting relatively stable results for the last three years.

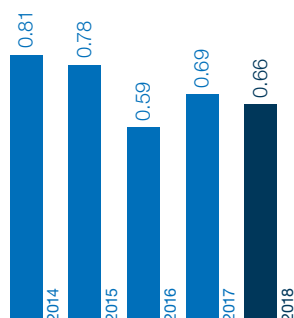
Greenhouse gas (GHG) emissions, measured as intensity value (tonnes CO<sub>2</sub>/admt), are higher than the prior year which is primarily a function of lower productivity as the Somerset Mill produced less saleable material due to the rebuild of Paper Machine 1, see bar chart.

We also measure absolute GHG Scope 1 and Scope 2 emissions for each mill, which are reflected in the bar chart.

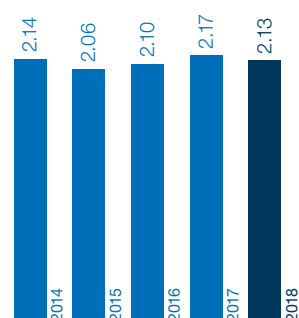
Particulate emissions  
(kg/admt<sup>a</sup>)



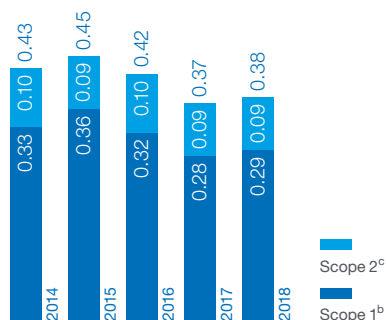
SO<sub>2</sub> emissions  
(kg/admt<sup>a</sup>)



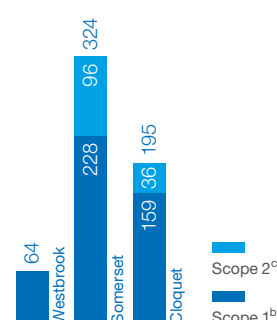
NO<sub>x</sub> emissions  
(kg/admt<sup>a</sup>)



GHG emissions  
(tonne CO<sub>2</sub>/admt<sup>a,d</sup>)



2018 GHG emissions by mill  
(1K tonne CO<sub>2</sub>e)



a Intensity metrics reflect the impact per air-dried metric ton (admt) of saleable product (including market pulp).

b Direct GHG emissions—emissions from sources that the company owns or controls.

c Indirect GHG emissions from purchased electricity, steam or heat—emissions associated with the generation of electricity, steam or heat.

d GHG emissions for 2014-2017 have been updated using the latest IPCC factors.

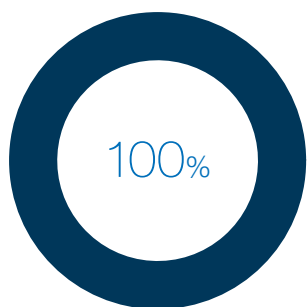


# Fiber

One hundred percent of our fiber (wood and pulp) is procured from well-managed forests and is third-party verified that it is from controlled and non-controversial sources. These third-party programs provide assurances that wood-based products have been procured from well-managed forests and are legally harvested. While Sappi does not own any forestland in North America, our foresters provide active forest management services for landowners within our procurement zones. We continue to support and recognize the efforts of multiple third-party certification programs, including FSC, SFI, PEFC and PEFC-endorsed certification programs including the Canadian Standards Association (CSA) and the American Tree Farm System (ATFS). The Point of Harvest certified fiber refers to wood fiber harvested from lands not otherwise certified by one of the aforementioned forest management standards, but rather is harvested by logging professionals who are trained and certified in practices designed to conserve forestland.

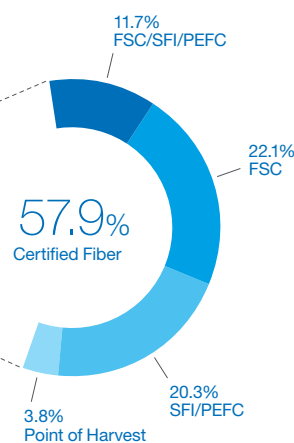
In 2018, Sappi adopted a definition of recycled fiber that is consistent with the EPA's definition of recovered fiber. The EPA's Comprehensive Procurement Guideline program's definition of recovered fiber includes both post-consumer fiber and post-industrial fiber including manufacturing scrap from paper converting operations. Both the SFI and FSC certification standards include post-industrial fiber as part of their claim and labeling schemes, however, because some sources of recycled fiber are generated on-site (e.g., trim from sheeters) these materials do not meet the FSC definition of pre-consumer fiber. Sappi's processes and recycled fiber sources have been verified by a third-party auditing firm (Bureau Veritas) as being in compliance with the SFI and PEFC requirements. Our McCoy, Opus and Flo Sheets grades all have a standard offering of 10 percent recycled fiber content. Web grades (including Opus, Somerset and Flo) are also available with 10 percent recycled fiber upon request.

2018 Total responsible fiber sourcing



100% of our forest fiber is from well-managed forests, at low risk of any controversial sources

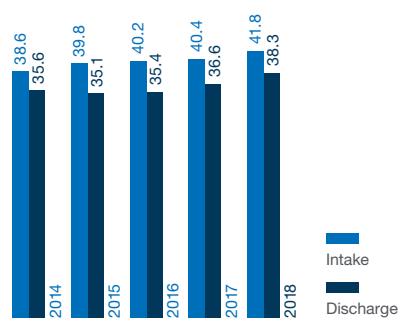
2018 Total fiber certification



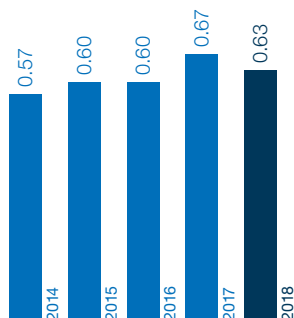
# Water

Our North American mills draw water from surface sources (rivers and lakes) and return treated water to the same primary sources. As we do with our emissions, we manage our use and discharge of water in accordance with comprehensive environmental permits. Our specific intake and discharge grew this year, yet we were pleased to see a decrease in biological oxygen demand (BOD) and total suspended solids (TSS), see bar charts. The decrease in BOD and TSS is in a large part due to the multi-year project at the Cloquet Mill. The specific water usage increase is primarily attributable to an increase at the Somerset Mill due to the low production resulting from the rebuild of Paper Machine 1. Note that specific water usage is an intensity value and is influenced by either the numerator or the denominator, and in this case it was the denominator—the production volume.

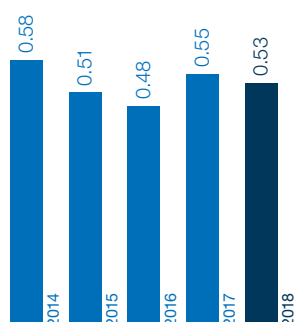
Water intake and discharge  
(m<sup>3</sup>/admt<sup>a</sup>)



Biological oxygen demand  
(kg/admt<sup>a</sup>)



Total suspended solids  
(kg/admt<sup>a</sup>)

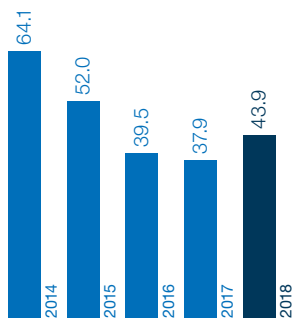


<sup>a</sup> Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).

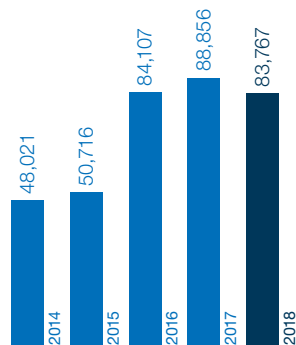
## Solid waste

Managing our solid waste and finding ways to minimize waste to landfill remains a focus at all of Sappi's North American mills. We have an ongoing effort to find beneficial uses for byproducts. We have been particularly successful at our Cloquet Mill, where we continue to work with local farmers who use boiler ash and lime mud as soil amendments for managing soil pH, which improves growing conditions for certain crops. This past year we saw an increase in waste to landfill, an anomaly that is primarily the result of the Paper Machine 1 rebuild at Somerset.

Total solid waste to landfill  
(kg/admt<sup>a</sup>)



Beneficial use of solid waste  
(tonne/yr)



a Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).



## Social indicators

Sappi takes a very active approach to social responsibility, both regionally and globally. Our three primary stakeholder groups are our employees, our customers, and the communities in which we operate. In addition to providing skilled jobs and continued job training, we improve the lives of our workforce and community by promoting freedom of association, nondiscrimination and the abolition of child labor.

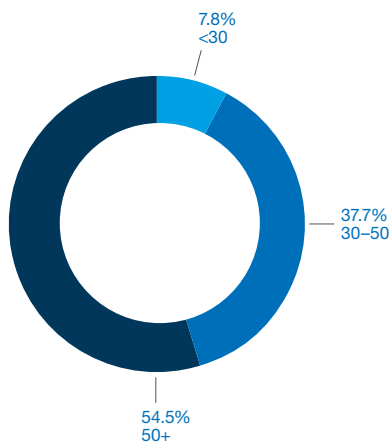
We work hard to promote employee training and have seen the average hours of training increase from 80 hours in 2017 to 114 hours in 2018 per year per employee. The reasons for this increase include the significant capital investments such as the new headbox for Cloquet Paper Machine 12, the Somerset woodyard equipment upgrade and the rebuild of Somerset Paper Machine 1—all of which required new qualification training to ensure safe operation of the equipment.

The decrease in salaried employee training is for similar reasons; the capital initiatives required extra time spent on these new initiatives, but it is through tracking these performance indicators that we are able to make adjustments to correct declines.

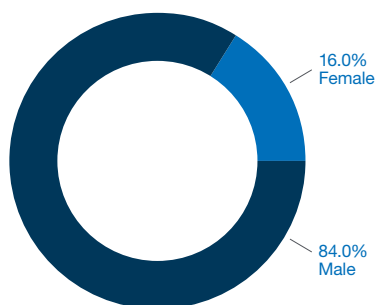
A similar trend is occurring with the increased turnover rate. This is a function of an aging workforce, an increase in retirements and improvement in economic activity. To address, we've increased STEM recruitment at local universities, promoted employee referral programs, and invested in employee development.

Below are demographic results for the year in the categories of age, gender, and employees represented by collective bargaining agreements.

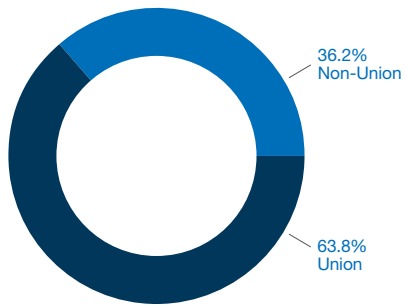
Sappi North America  
age demographic



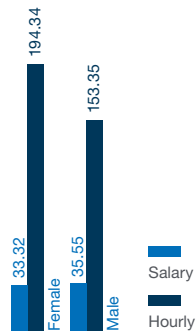
Sappi North America  
workforce by gender



Percentage of employees covered by collective bargaining agreements



Average hours of training per year per employee by employee category



Total number and rate of employee turnover



## A letter from Jennifer Miller



Looking back on 2018, I am struck by the degree to which sustainability-driven values, ideas, and strategies were an integral part of Sappi North America's business success. We have a market advantage as a renewable resource company, offering customers around the globe sustainably sourced printing papers, packaging and specialties, and dissolving wood pulp products. Our energy profile makes us a leader in the manufacturing sector, with 74 percent of our fuels derived from renewable sources, and with a low carbon footprint reflecting a decades-long focus on energy efficiency, conservation and reduction of use of fossil fuels.

Equally important, we have made decisions designed to deliver long-term sustainable value—recognizing the role of customer preference for natural, recyclable materials plays into our packaging, textile and communication goals. In 2015, the Sappi Group shared our 2020Vision, which details a bold realignment of our business and increases contributions from packaging and specialties, dissolving wood pulp, and biomaterials—all while continuing to optimize graphic paper.

In 2018, we renewed our commitment to a leading sustainability platform by adopting a new Group policy for wood fiber procurement and setting forth a comprehensive Group Supplier Code of Conduct. Sappi North America now has a full complement of sustainability professionals in Sandy Taft, Rebecca Barnard and Lynne Palmer featured earlier in this report. This engaged, collaborative team is focused on how to best implement

the new risk management strategies and increased market transparency implicit in these policies.

With our newly diversified business profile, we will continue to reinvent how we connect with our customers—addressing market trends and customer expectations to sustain our position as a relevant, trusted partner in all our business segments.

Sappi recognizes that we operate in a complex, circular economy, and that continual innovation in our products and the materials we choose can be as important as the attributes those products carry. We are actively exploring innovative uses for renewable wood fiber, biomass and other residuals our manufacturing processes involve. Exciting biomaterials, some at the nano-cellulosic level, can be added to material composites to add strength while lightweighting and thereby lowering overall carbon footprint.

The first step in any renewal process is to look back and see where you began. In Sappi North America's very first regional sustainability report back in 2011, I stated that our commitment to sustainability would be based on "proof, not promises." In the years since, we have worked hard to honor that statement and have remained committed to a fact-based dialogue with our employees, customers and communities. We have been transparent and forthcoming in reporting our progress against goals, admitting gaps where they exist and celebrating success when achieved. As our journey continues, we look forward to hearing from you—both your good ideas and your challenging questions. Together, we will continue to build a strong, sustainable company—one that delivers value beyond our product, through the contributions we make to healthy environments and thriving economies that foster real opportunities for people to grow and prosper.

**Jennifer L. Miller**  
Chief Business Sustainability Officer  
Sappi North America



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#### Sappi North America 2018 Sustainability Report

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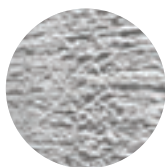
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### Sappi North America's Business Units



Dissolving  
Wood Pulp



Printing  
Papers



Packaging and  
Specialty Papers



Casting and  
Release Papers