



# 2020

## People • Customers • Trust

nified resilient renewable innovative principled recyclable responsible natural adaptive strategic essential sustainable collaborative emp



Responsibility Report

# Packaging Corporation of America is an ideas and solutions company.

principled recyclable renewable innovative unified resilient prepared natural adaptive empowered essential sustainable collaborative

**Our Packaging segment** is known for its expertise in the manufacturing and sales of containerboard and corrugated products, and our **Paper segment (Boise Paper)** produces and sells consumer-brand office and business papers. Together, we are focused on bringing value to a growing number of customers around the world.

PCA is a **large company** with a **small-company feel**. Our customers enjoy wide-ranging resources, benefits of scale, as well as responsive service in the right place at the right time.

PCA's common stock is listed on the New York Stock Exchange under the ticker symbol **PKG**.

PCA is the **third largest producer of containerboard and corrugated products** in North America. We manufacture a complete range of high-performing linerboard and corrugating medium at our containerboard mills and produce a wide variety of corrugated containers and displays at our converting facilities.

Boise Paper is the **third largest producer of uncoated freesheet** in North America. Our team is dedicated to providing high-quality products, outstanding customer service and industry-leading supply chain performance, with a product portfolio that includes office papers and printing and converting papers.

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# 2020

## Executive Statement

**June 30, 2021** To all stakeholders,



**Mark W. Kowizan**

*Chairman and  
Chief Executive Officer*

The COVID-19 pandemic and extreme weather events of 2020 have tested the resilience of global supply chains, domestic economies and our collective will. PCA's response to these events demonstrates that we are always guided by our foundational principles of **People • Customers • Trust**. We continue to be committed to safeguarding the well-being of our employees; providing essential, sustainable products to our valued customers; and protecting the natural environment. As an extension of our long-term business philosophy and our commitment to thinking and acting responsibly in all that we do, I am pleased to share that PCA's Board of Directors has formed a Sustainability Committee, which will provide oversight for all environmental, health and safety, and sustainability matters.

Increasing competition for labor presents challenges to our operations both now and in the future. We are therefore working to attract diverse talent by embracing an inclusive work environment that considers the unique needs of all workers. We are establishing a Diversity, Equity and Inclusion Council to hone our strategy, create a roadmap for inclusive leadership and set goals for the organization.

Innovative ideas and solutions come from a strong and diverse workforce, and the contributions of our people will be instrumental in developing effective ways to address the impacts of climate change. PCA is committed to doing our part to support the American Forest & Paper Association's 2030 goal of reducing total scope 1 and 2 greenhouse gas emissions intensity by 50% from a 2005 baseline. To pursue this goal, we have assembled a Carbon Neutrality Team, which is responsible for leading our efforts and plotting our course.

One of PCA's many strengths is that we take action when others are in need. This was clearly demonstrated when the employees of our DeRidder, Louisiana, containerboard mill responded to the devastation caused by Hurricane Laura last August. I'm proud to share the details of their response in this report. Their actions were unprecedented and set a new standard for how our operations support members of their community.

The areas surrounding most of our mill communities contain abundant forestland. Our business depends on the health of these forests, which also provide clean air, clean water and recreation for the community, and habitats for wildlife. In order to protect this critically important natural resource, we are continuing to engage with our supply chain partners to help forestland owners become better stewards of their land.

Achieving our shared goals takes time and coordinated effort. PCA will continue to take a long-term view and is committed to continuously improving our sustainability efforts. I am confident in the ability of our people to serve our customers by delivering the most sustainable products, manufactured in facilities that are dedicated to achieving the highest standards in safety, quality and social responsibility.

We appreciate your continued interest in our progress.



# Company Profile 2020

15,200 employees \$6.7 Billion in revenue

## Packaging Segment

## Paper Segment

<b>6</b> containerboard mills	<b>90</b> converting operations	<b>2</b> white paper mills
<b>4.3</b> million tons of containerboard	<b>62.8</b> billion square feet of corrugated products	<b>650</b> thousand tons of uncoated freesheet
<b>16,000</b> customers <b>33,000</b> locations		<b>100</b> customers <b>400</b> locations

*Note: PCA's paper segment operates under the trade name Boise Paper, a division of Packaging Corporation of America.*

# general disclosures

- Sustainability Strategy**
- Stakeholder Engagement**
- Materiality**
- Key Impacts**
- Map of Locations**
- 2020 Goals**
- 2030 Goals**

# general disclosures

## Sustainability Strategy

PCA's sustainability strategy is built on our core values: **People • Customers • Trust**. People are at the very heart of this philosophy. The safety, health and well-being of our people is essential to our success. We care about each other, our customers and the communities in which we operate, and we work tirelessly to earn the trust of our stakeholders.

We consider ourselves an ideas and solutions company. We believe it is essential to hire and promote diverse candidates and employees in order to bring the best ideas to life. We strive to be an employer of choice and are establishing a Diversity, Equity and Inclusion Council to hone our strategy and to create a roadmap for inclusive leadership.

Our customers are seeking packaging solutions that are sustainable. They also want to work with companies that are guided by strong moral and ethical standards. PCA has and will continue to rise to the challenge of meeting the ever-growing needs of our stakeholders. We are an established, world-class organization with a truly local focus. This local focus goes beyond our business relationships, and we pride ourselves on being a contributing member of the communities where we operate.

PCA mills are powered primarily with biogenic fuels, a carbon-neutral and renewable form of energy. To accelerate and further our progress, we have established a Carbon Neutrality Team, responsible for developing and implementing our strategy to become a carbon-neutral company.

PCA products are made from a renewable natural resource — trees. Our supply of timber is grown to be harvested, which provides ecosystem services during the growth cycle, including sequestering carbon dioxide, providing clean water and serving as habitats for wildlife. Our high-performing packaging products protect and market our customers' products, which improve people's lives and support the economy. And our paper products help people share important information while providing a 99.99% Jam-Free<sup>®</sup> performance guarantee — saving our customers time and frustration. At end-of-life, greater than 95% of our products are recyclable and support the exceptional recycling rates for corrugated and paper products.

This report shares many of the specific actions we are taking, along with our progress to date, and how we engage to make a positive impact on our planet and society.

# general disclosures

## Stakeholder Engagement

PCA employees engage with our stakeholders on an ongoing basis, both through the normal course of business and through specific programs of targeted engagement. At the local level, this includes engaging with members of the community (including governments) to understand their needs and goals and to identify how PCA can best provide support. We also engage with our suppliers to ensure that we are always able to meet our customers' needs. Our most focused engagement programs, however, are with our employees and our customers.

Our employee engagement program, Your Opinion Counts, is offered to approximately 10,000 employees of PCA's Corrugated Products group. We are working toward expanding our efforts to include all employees. Our customer engagement program, Customer ConneXions, is currently offered to customers of PCA's Corrugated Products group. These programs help us focus our efforts to ensure we are meeting our employees' needs and exceeding our customers' expectations every day.

### Employee Engagement, Your Opinion Counts

At PCA, we believe that people make the difference. Our culture encourages our people to do their best and to do what's right — for each other and for our customers. We hold ourselves accountable for results and continuously strive to be better. Although we did not survey our employees in 2020 (as scheduled) due to the COVID-19 pandemic, we typically solicit their feedback every two years to learn about their work experience. Our next survey will also include Diversity, Equity and Inclusion topics. Once the survey results are collected and analyzed, we then focus on turning our results into action so that we can make PCA an even better place to work.



We partner with an independent third-party research firm to tabulate and analyze the results of the survey to ensure the integrity of the process and the anonymity of respondents, which provides all employees the opportunity to respond openly and honestly.

We continue to have a high survey response rate, assuring us that the survey results strongly represent the feelings and opinions of our employees. Our 2018 employee engagement index trended upward and remained notably above the Global Manufacturing Benchmark index. In their survey responses, our employees reaffirmed our strong safety culture and also overwhelmingly agreed that they enjoy the work they do and that it gives them a sense of personal accomplishment.

### Customer Engagement, Customer ConneXions

Our customers know that a partnership with PCA isn't just about buying boxes. It's about building a relationship with a knowledgeable, trusted, committed source; adding value to their business and actively contributing to their success in the marketplace.



PCA takes this responsibility very seriously. We survey our customers on an ongoing basis in an effort to measure customers' perception of their relationship with us and to ensure that we are delivering on our promises. During

2020, PCA did not conduct our normal relationship survey due to the pandemic. Instead, we developed a brief customer operations survey that helped us understand how the pandemic was impacting our customers' operations. We received feedback regarding the

# general disclosures

status of their operations and guidelines related to supplier visits. The customer response to this survey was overwhelmingly positive and it helped guide PCA's engagement with our customers during this unprecedented time.

We partnered with a thought leader in the customer engagement space to help us develop survey tools and measure our performance against metrics that are important to our customers. The feedback we receive is shared and acted upon in a timely manner and enables the voice of the customer to be central in our decision making.

The response rate for business-to-business organizations typically averages around 12% to 15%. PCA's response rate is significantly higher, indicating a high level of engagement between our employees and our customers. Our Net Promoter Score is also significantly higher than other manufacturing organizations.

PCA's business philosophy is that highly engaged employees lead to highly engaged customers. Our survey responses validate this statement as our customers repeatedly acknowledge the strong collaborative relationships they have with PCA's sales and customer service professionals.



# general disclosures

## Materiality

To determine materiality, we first considered information published by thought leaders, data-driven reports on the needs and expectations of stakeholder groups like landowners and communities as well as, and especially, the needs of our employees and customers. In this process we were also informed by the material topics defined by the Sustainability Accounting Standards Board (SASB) industry standards for Pulp & Paper Products and Containers & Packaging, as well as investor surveys and metrics reported on by raters and rankers. Our Corporate Sustainability team members regularly attend major sustainability-focused conferences and webinars to make certain that we are educated as to best practices and new opportunities and that we are attuned to expectations of stakeholders.

As a result of our research, our materiality assessment started with a list of 21 topics. We engaged with our stakeholders to determine which topics are material to our business and scored the data we gathered accordingly. In doing so, there was a clear bifurcation of topics, and those in the bottom tier are considered immaterial. Fourteen topics are considered material, which align with 16 topic-specific GRI standards.

To determine significance of potentially material topics in this report, we looked to the two most impactful stakeholder groups — PCA employees (“people”) and our customers. We surveyed employees across the country to force-rank topics in the order they felt is most significant to PCA. We also conducted research on 45 of our largest customers to determine what each has deemed to be material to their organization. Our research includes analysis of their public statements, policies, sustainability reports and website content, as well as considering direct interactions we’ve had throughout the course of our relationship.

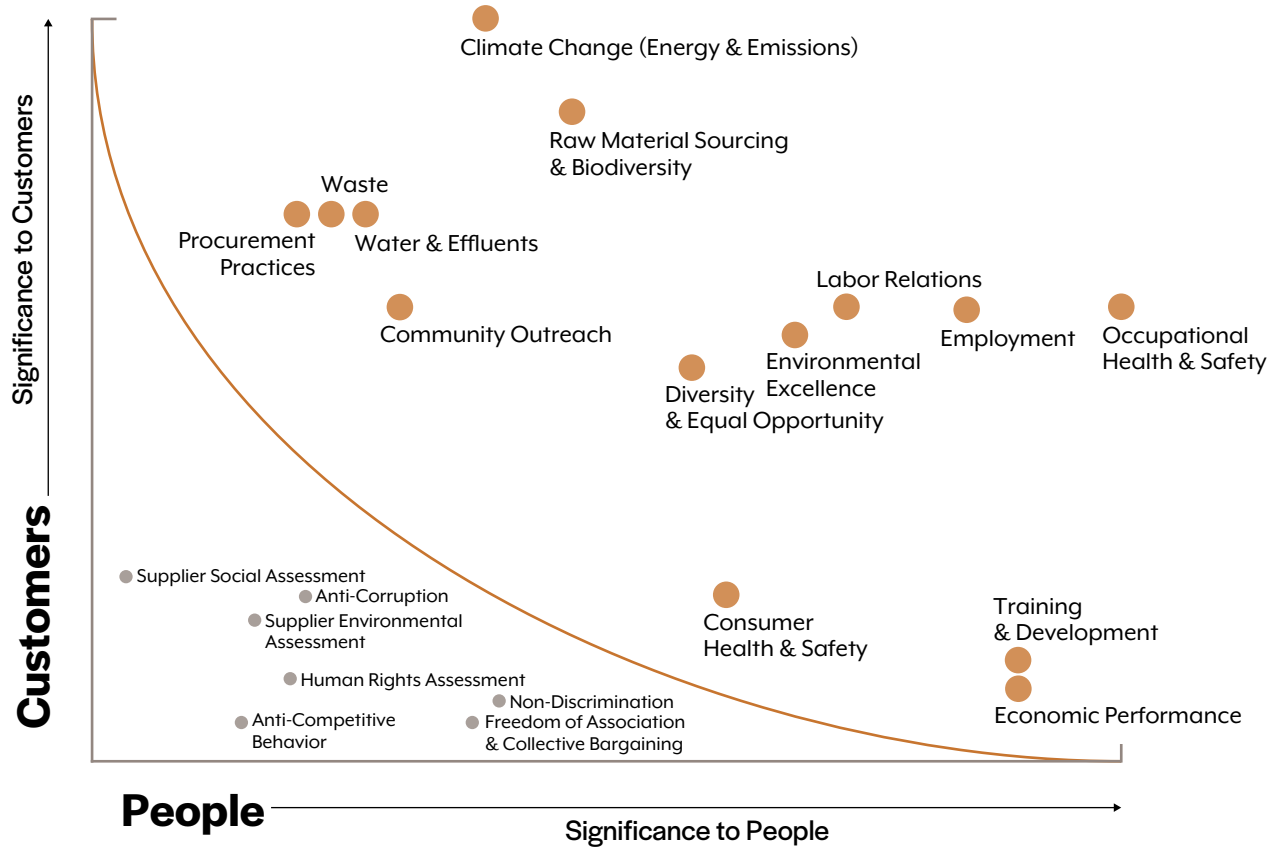
In our matrix displayed on the following page, we considered our two most critical stakeholders: our people and our customers. Since the data were captured using different methods for each group, values were indexed based on the most significant topic so they could be plotted. Significance is an indicator of where we must focus our efforts to earn even greater trust from our stakeholders.

We believe PCA’s culture, supported by our core values, are the foundations of a sustainable company. For this reason, we aligned our material topic disclosures with the most suitable core value throughout this report — placing the highest-rated topics as appropriate to the specific values: People • Customers • Trust.

We are reporting on the 14 material topics as seen in the upper-right of the chart. The topics that did not reach the significance threshold may still be important; however, they did not garner enough support to be included in this report. If our stakeholders feel strongly about the materiality of any given topic, we hope they will engage with us and be willing to enter into a constructive dialog.

# general disclosures

## 14 Material Topics Identified as Most Significant to PCA People and PCA Customers



### Global Reporting Initiative (GRI) Index

We leverage our GRI Index to report many of our general disclosures, which streamlines our reporting process. The majority of these disclosures appear in our Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC), in other SEC filings and in policies available on our website. You can find our index at the back of this report starting on page 56, as well as in the Sustainability section of our website, located at [www.packagingcorp.com/sustainability](http://www.packagingcorp.com/sustainability).

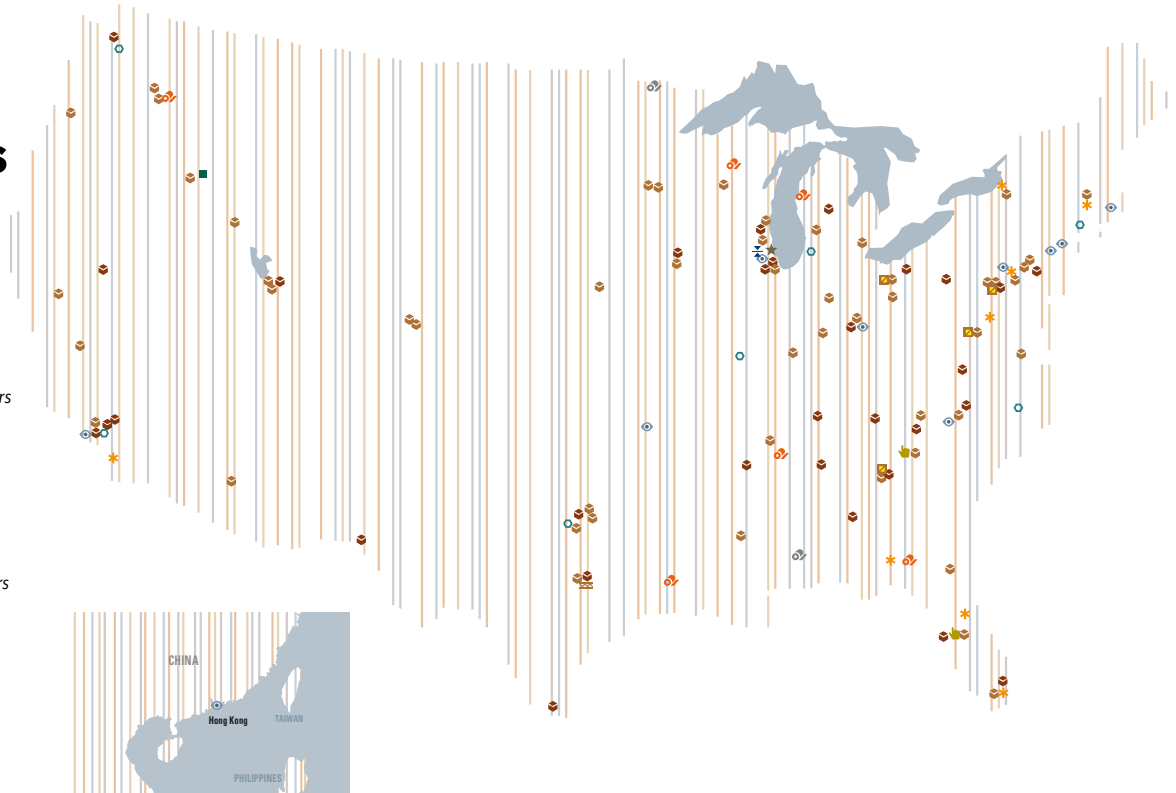
# general disclosures

## Key Impacts

<i>PCA Impacts for Material GRI Topics</i>	<i>Fiber Sourcing</i>	<i>Pulp and Paper Making</i>	<i>Converting</i>	<i>Support, Service, Provision</i>	<i>Customer Use</i>	<i>End-of-Life, Recovery</i>
<b>Environmental</b>						
Materials	•	•	•			•
Energy		•	•			
Water & Effluents		•	•			
Biodiversity	•	•				
Emissions		•	•			
Waste		•	•			•
Environmental Compliance		•	•		•	
<b>Social</b>						
Employment		•	•	•		
Labor Management	•	•	•	•		
Occupational Health & Safety	•	•	•	•		
Training & Education	•	•	•	•		
Diversity & Equal Opportunity		•	•	•		
Local Communities	•	•	•		•	•
Consumer Health & Safety	•	•	•		•	•
<b>Economic</b>						
Economic Performance	•	•	•	•	•	•
Procurement Practices	•	•	•	•		

## Map of Locations

- Full-Line Plants
- Sheet/Specialty Plants
- Hexacomb Plants
- Packaging and Supply Centers
- Sheet Feeder
- Retail Design Centers
- Fulfillment Centers
- Technical Center
- Containerboard Mills
- White Paper Mills
- Resource and Support Centers
- Administrative Offices
- Corporate Headquarters



# general disclosures

PCA’s operational performance helped the industry achieve many of the American Forest & Paper Association’s *Better Practices, Better Planet 2020* goals. Additionally, we will be aligning with their 2030 goals to continue improving our own (and the industry’s) performance. For more information on these goals, please visit the sustainability section of the AF&PA website.

## 2020 Goals

AF&PA *Better Practices, Better Planet*

Goal	Metric	2005 Industry Benchmark	2020 PCA Performance	2020 Industry Target	Status
15% reduction in greenhouse gas (GHG) emissions (intensity)	Tons CO <sub>2</sub> e/ton of product	0.83	0.60	0.70	<b>Achieved 25% reduction</b> (Exceeded industry target)
12% reduction in pulp and paper mills’ water use (intensity)	Gallons (effluent)/ton of product	11,280	11,024	9,930	<b>Did not meet</b> reduction from industry benchmark
10% increase in purchased energy efficiency (intensity)	MMBTU/ton of product	12.9	8.9	11.6	<b>Achieved 31% increase</b> (Exceeded industry target)
Increase fiber procurement from certified forestlands and certified fiber sourcing programs	Percentage	23% from certified forestlands 87% from certified fiber sourcing	33% from certified forestlands 100% from certified fiber sourcing	Increase from benchmark	<b>Achieved</b>
25% reduction of recordable incident rate	Recordable cases x 200,000/total hours worked	2.6*	1.9	2.0	<b>Achieved 27% reduction</b> (Exceeded industry target)

\* The benchmark year for this goal is 2006.

Notes: GHG and energy goals include both containerboard and white paper mills and converting operations. • Water and fiber goals are containerboard and white paper mills only. • “Tons of product” = Tons of containerboard and uncoated freesheet produced in 2020 (4,989 thousand tons).

## 2030 Goals

PCA will continue to build on our progress and is committed to helping the industry achieve the ambitious AF&PA 2030 goal of reducing total scope 1 and 2 greenhouse gas emissions intensity by 50% from a 2005 baseline. We have established a Carbon Neutrality Team (“the Team”), responsible for developing and implementing our strategy to achieve this goal.

One of the foundational elements of this strategy is developing a framework for identifying opportunities. The Team is piloting and validating a carbon model for our DeRidder containerboard mill that will be used to understand the various levers and their magnitudes of impact. These learnings will form the basis for creating models for all of our mills, which generate the substantial majority of our scope 1 and 2 greenhouse gas emissions.

We are also looking to assess our practices and, where appropriate, to introduce goals for other material environmental and social topics relating to water; diversity, equity and inclusion; fiber sourcing; supply chain; and community outreach.

**PCA's success is made possible by a highly engaged, results-oriented workforce operating in an entrepreneurial culture.** Our people are a differentiator in the marketplace, because we place the right people in the right roles and empower them to succeed.

As part of our materiality assessment, we surveyed employees across the country on sustainability issues to determine which topics are most significant to them. Those topics are reported here in order of significance beginning with the highest-ranked. This section of our report includes topics essential to our people, their health and safety, their development and how we strive to create a fair and inclusive workplace that enables them to flourish. Our people have written our history of success and growth, and they will create our future.

# people

**Occupational Health and Safety**

**Training and Development**

**Employment**

**Labor Relations**

**Diversity, Equity and Inclusion**

## Occupational Health and Safety

PCA is committed to providing and maintaining a safe and healthy work environment for all employees. We approach our occupational health and safety objectives in multiple ways to best guarantee success. We invest in our people, ensuring they have the appropriate training and protective equipment, and we invest in our equipment to ensure it is well maintained, reliable and safe to operate. To realize our philosophy that all accidents are preventable and an injury-free environment is achievable, we have implemented a robust occupational health and safety management system.

### Occupational Health and Safety (OHS) Management System

PCA's OHS management system includes elements intended to engage employees, define success and provide practical guidance to achieve excellence. These elements include management commitment, safety policy, safe work rules, employee training, safety meetings, employee involvement, safety committee, facility inspections, incident investigation, medical treatment/first aid, plant emergency organization, hazard/risk assessment, job hazard analysis, communication, industrial hygiene, ergonomics and environment.<sup>1</sup> Our management system elements are also incorporated into contractual labor agreements, where applicable. Resources and tools that support the management system are available to employees on PCA's health and safety intranet site.

### Workers Covered by an OHS Management System

All employees, temporary workers and contractors are subject to and are covered by PCA's OHS management system. Contractor agreements require that foundational safety training is provided to workers, and site-specific health and safety training is also provided by PCA.<sup>2</sup> PCA utilizes a third-party verifier to ensure contract workers receive adequate health and safety training, maintain written safety programs and have a demonstrable history of safe operation.

### Worker Training

PCA provides guidance and instruction for completing federally mandated training required under the OSHA Act.<sup>3</sup> Training is delivered in a variety of methods including classroom instruction, online modules, block training and on-the-job training.

In addition to the federally mandated OSHA training, each job classification has specific safety training provided prior to an hourly associate being placed in the job. Training includes task-specific safety requirements of that job and how to perform them, as well as awareness of the required task-specific personal protective equipment (PPE). Training records are maintained by each location.

<sup>1</sup> PCA's OHS management system accounts for requirements outlined in OSHA's Illness and Injury Prevention Program and 29 CFR Subpart R 1910.261 "Pulp, Paper and Paperboard Mills" Additional guidance is provided through various standards written by the American National Standards Institute (ANSI), and Industry Practices.

<sup>2</sup> PCA has an internal Safe Operating Practice Instruction dedicated to practices of outside contractors, in addition to [Safe Practices for Outside Contractors](#), available on our website.

<sup>3</sup> Identified training includes federally mandated OSHA training under 29CFR1910.261.

## Health and Safety Leadership

To lead the implementation of the OHS management system, PCA has a Health and Safety group that consists of a Senior Vice President, a Vice President, Senior Directors, Corporate Managers, Regional Managers, and Facility Health and Safety professionals. Collectively, our leaders have demonstrated safety excellence for decades, and many team members hold professional certifications including Certified Safety Professional (CSP) and Certified Hazardous Materials Manager (CHMM).

Our leaders strive to be strong mentors for the next generation of health and safety leaders at PCA, and they work collaboratively within our industry safety committees.<sup>4</sup> These committees work to raise awareness; share ideas and best practices; and stay current on trends, regulations and shared opportunities within the industry. The Health and Safety group meets throughout the year for training, performance and program reviews, and strategic planning.

PCA's Sustainability Committee provides Board-level oversight of health and safety.

## Health and Safety Audit Program

PCA's policy requires health and safety audits to be conducted every three years at minimum. Audits are conducted by corporate and facility health and safety professionals. Their findings and recommendations are shared internally.

Employees are instructed and encouraged to report workplace hazards along with corrective actions. Reporting of hazards can be communicated through entry into our electronic work order system; verbally with a supervisor, other members of management or joint health and safety committee members; or via the PCA Hotline. Employees are free to report workplace hazards without fear of reprisal.<sup>5</sup>

## Incident Investigation

PCA provides written instructions on how to report and investigate near misses, first aid treatment, doctor visits, restricted duty cases and lost time accidents. We use investigation techniques designed to identify root causes and develop corrective actions utilizing the hierarchy of controls. Work-related incidents are entered into an electronic incident reporting database for tracking and notification. Incident trending and analysis is performed utilizing functions in our reporting database. Reports are used to identify leading causes of incidents, root causes, and appropriate corrective actions. Data is used to develop improvement plans for incident and injury reduction.

## Health Services

PCA maintains and has available health and emergency response services at all its locations. PCA paper mills have either registered nurses, licensed practical nurses, EMTs or paramedics on-site during the day and either on-site or on call after hours. These licensed medical professionals provide services such as spirometer testing and audiometric examinations. In addition to these services, they offer many health and wellness procedures such as blood pressure screenings, health consultations, health education and over-the-counter medications. All employees are encouraged to visit the medical facility to discuss any health issues or concerns they may have at any time.

<sup>4</sup> PCA leaders actively participate in trade association safety committees for the Fibre Box Association (FBA), American Forest & Paper Association (AF&PA), the Pulp and Paper Safety Association (PPSA) and the Technical Association of the Pulp and Paper Industry (TAPPI).

<sup>5</sup> This is supported by union contractual language known as "Right to Act" as well as PCA's Code of Ethics and Business Conduct and federal law (U.S. Department of Labor – Whistleblower Protection Act).



PCA’s converting operations have access to a 24/7 nurse triage line. All plants maintain first aid supplies and have employees certified in CPR and first aid. Corporate policy requires that each shift be staffed with at least two individuals with CPR and first aid certifications.

### Worker Participation, Consultation and Communication

All PCA paper mills have union contracts, which include language concerning hourly associates’ participation in safety activities. This participation consists of safety committees that meet regularly to discuss issues and concerns, to identify opportunities to mitigate potential hazards and to serve as information exchange sessions. Hourly associates also play pivotal roles within departments and include safety coordinators and auditors during shutdowns. In addition, United Steelworkers (USW), International Association of Machinists (IAM) and PCA’s management have annual contractual roundtable meetings. Employee participation in the roundtable comprises union leadership, hourly employees and management. Topics discussed cover best practices, trends and issues; action items are identified and tracked to completion by the moderator and union officials.

PCA’s converting operations maintain joint Health and Safety committees that meet monthly. Minutes are kept and posted where all employees have access. Committee members are represented by all shifts and include management and hourly employees. Safety committees participate in safe plant operating assessments, incident investigations and inspections. Other employee participation options include being a member of the plant emergency organization. In addition, Effective Joint Health and Safety Committee training is being completed at all USW-represented locations.

### Promotion of Worker Health

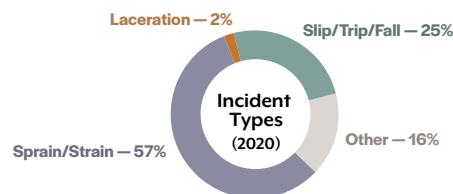
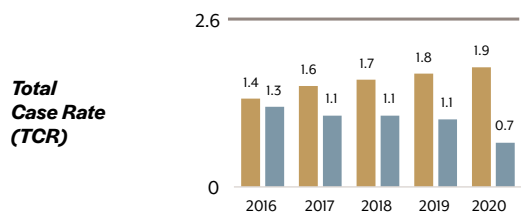
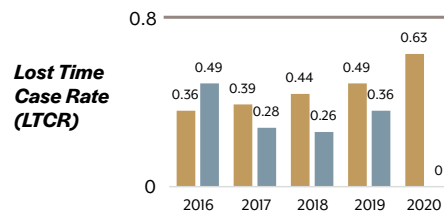
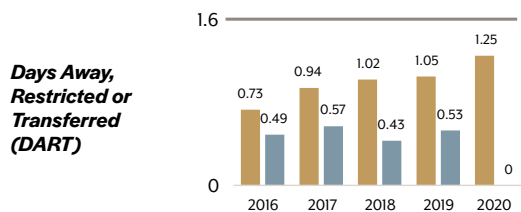
Subsidized full-time employee benefits include medical, dental and vision insurance; access to an Employee Assistance Program (EAP); short-term disability; life insurance and health screening services. The EAP addresses mental and general health concerns and is available for employees and family members. Communication for these services is provided through posters and e-mail.

PCA partners with Catapult Health Service, whose goal is to empower individuals to improve their health through preventive health checkups and health fairs held at the worksite. Events are free to employees and families.

### Safety Performance Metrics

(cases x 200,000/total hours worked)

LEGEND: Employees Temporary Workers Industry Average





## Training and Development

The expertise and engagement of our workforce is one of PCA's greatest competitive advantages. That engagement, as well as the skills and knowledge of our team members, are key to PCA's ongoing success. Now, more than ever, continuous learning and development are essential. We strive to keep PCA and our employees at the leading edge. Our premise is that investing in education and development will enhance personal growth while creating value for the larger organization, our customers and communities.

As part of that investment, we offer and make available a range of resources to all employees. We also offer a number of job-specific programs designed to both keep employees current and to enhance their continued professional growth. In addition, PCA provides several educational programs and opportunities to those who have demonstrated both interest and ability to grow in management and leadership roles.

### Training Programs and Hours of Training

In 2019 we expanded our reporting to include several additional categories that we track centrally or can reliably estimate hours of training where records are retained locally. Due to the COVID-19 pandemic, some of our in-person training offerings were temporarily suspended if we were unable to conduct them in a manner that guaranteed our employees' health and safety.

We are reporting training hours per employee based on training hours logged at our Training and Resource Center, Online Maintenance Training (TPC) and through our e-learning platform. In 2020, PCA averaged 1.6 hours of training per employee.

### Training and Resource Center

PCA's Training and Resource Center provides education for our employees on a variety of subjects, including basic and advanced corrugating and converting techniques, corrugator and plant scheduling, and transportation. Our experienced staff provides leadership, training, operational assistance and industry knowledge to assist PCA's box plants in achieving their goals. Due to the COVID-19 pandemic, we did not host any training activities at our Training and Resource Center in 2020.

### E-Learning

Learning online is a proven solution for enhancing the skills of our employees. E-learning offers courseware so that employees geographically distributed across the United States may access quality content without the need for travel.

Thousands of e-learning assets are available to all employees. The majority of our online resources are available 24 hours per day, 7 days per week. This benefit is available at no cost to PCA learners. Examples include:

**Online Language Learning (Rosetta Stone)** Courseware for 38 languages.

**Training and Development** A robust selection of courseware, executive summaries and videos on a range of skills and desktop applications.

**PCA Learning Library** Custom content developed by PCA subject matter experts on a variety of topics.

<i>Resources Available</i>	
Books	34,647
Skillssoft Courses	8,625
Custom Courses	639
Instructor-Led Courses	34
Other Resources	2,800
Videos	7,884



PCA e-learning started in 2001 and has seen over 6,000 individual learners complete 36,500 courses. In 2020, 7,602 courses were completed by 4,615 employees — 3,046 men and 1,569 women — for a total of 5,518 hours.

### Industrial Maintenance Training and Development

Online maintenance training, provided by TPC (an outside vendor), is available for maintenance teams to enhance and develop their skills. TPC offered 184 courses and 20 webinars in 2020.

We began using TPC maintenance training in 2010, and we have had over 1,400 individual learners complete 32,300 courses. In 2020, we had 211 learners who completed a total of 19,016 hours of training.

### Leadership and Development

Throughout PCA’s history, several initiatives and programs have been developed internally to grow PCA’s leaders of tomorrow and build on the strengths of our current front-line, functional and general management leaders.

As we look to the future, we have continued to enhance our approach to training and development, finding new ways to better serve our employees and help them to grow and achieve excellence. We are leveraging technology and the experience of PCA experts to develop personalized content that is aligned with our business objectives and is made available virtually for broader reach. We also embed frequent feedback into the training process to increase engagement and ensure that content is on the leading edge. This approach helps empower our employees to grow their skillset and ensures that our customers continue to get the support they need to grow their business.

Current programs are as follows:

**Generational Investment for Tomorrow Program (GIFT):** Developmental program for college recruits or other new employees who are highly engaged and demonstrate leadership potential. Participants rotate among and learn across operational roles with an intent of furthering PCA’s bench strength. GIFT participants attend conferences throughout the year to equip and build their leadership development competencies.

**Blueprint for Success:** Developmental program for college recruits graduating with an electrical, mechanical, chemical or industrial engineering degree. Engineers hired at PCA as part of the Blueprint for Success Program participate in a series of technical, functional and leadership development learning opportunities. The goal of the program is to equip engineers with the skills they need to optimize processes across PCA.

Engineers are paired with a mentor, and they collaborate on similar projects and engage with other program participants through a Microsoft Teams channel. Each engineer has multiple one-on-one calls with PCA’s Training and Development Manager to provide feedback on their experience in the program.

### Educational Assistance

PCA established the Educational Assistance Program to support salaried employees in developing their capabilities through reimbursement of costs incurred in pursuit of degrees. Additionally, some participants of our Internship/Co-Op program qualify for tuition reimbursement.<sup>6</sup>

**2020 Educational Assistance Participation and Contribution**

Employees		Co-Op		Total
Women	Men	Women	Men	
43	42	0	9	94
\$393,500		\$41,500		\$435,000

<sup>6</sup> Qualifications include minimum GPA of 3.0/4.0, at least one semester as a co-op or intern, and must be in their senior year of college.

## ESG Training

We also train our employees on topics important to reducing risk, such as cybersecurity. The following trainings are specific to environmental, social and governance (ESG) topics:

### Cybersecurity

Data fraud or theft and cyberattacks have been considered top global risks in terms of likelihood since 2012, and recent ransomware attacks have brought this risk into focus for many companies. To heighten our protection against cyber threats, we sought new and innovative ways to protect ourselves beyond the digital space. PCA recognized social engineering as the main avenue malicious actors use to gain access to digital assets, so we knew we needed a better-trained workforce.

We conducted research and found that humor played an important role in helping adults learn, and we wanted to avoid long, PowerPoint-types of courses. In February 2019, we launched a new training program utilizing short, comical videos that are easy to follow and understand. These videos cover topics such as phishing, data protection, physical security and sharing of sensitive information. In 2020 our employees completed 70,882 courses, totaling 3,544 hours.<sup>7</sup>

### Ethics and Compliance

PCA holds ethics, integrity and lawful conduct as essentials. To ensure that our high standards are upheld, we require salaried and supervisory employees to participate in and complete periodic online education on topics such as antitrust laws, protecting confidential information and intellectual property, conflicts of interest, financial integrity and fraud, insider trading, sexual harassment, and employment law. We also conduct in-person training for sexual harassment. In total, 7,473 hours of ethics and compliance training were completed in 2020.

### Fiber Sustainability

As part of our fiber sustainability and chain of custody program, we provide annual training to a large population of PCA employees. Content varies between woodlands and mill staff and those at our packaging plants, and the depth varies by job function. We also prepare internal auditors to ensure each location maintains conformance to the standards. We provide a mix of on-demand content as well as live webinars. Records for salaried employees are maintained centrally, and hourly records are retained locally. In 2020 we reached over 9,500 employees for a total of 2,200 hours completed.

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<sup>7</sup> Assuming three minutes per training video and test question.

# Employment

PCA strives to be the employer of choice and works to create a culture where all employees are treated with respect and dignity in a “golden rule” work environment.

Employment decisions including hiring, performance appraisals, promotions and discharge are based on an employee’s qualifications, skills and performance without regard to race, color, age, national origin, ancestry, religion, religious creed, sex, sexual orientation, gender, gender identity, gender expression, physical or mental disability, medical condition, genetic information, marital or military status, or other characteristics covered by Title VII of the Civil Rights Act of 1964 as amended and other applicable federal and state law. PCA will not tolerate discrimination of any employee on such basis.<sup>8</sup>

People are critical to how PCA attracts our customers and their business. Consequently, people are essential to our success, and we place a high priority on attracting talented and engaged employees. Retaining those whom we recruit and develop is paramount as we work toward achieving our objectives.

**2020**  
**15,200**  
 Employees  
**99.9%**  
 Full-Time  
**99.7%**  
 In the U.S.

**New Employee Hires**  
by age, 2020

	Total	Women	Men
18–24	564	91	473
25–34	725	93	632
35–44	448	69	379
45–54	308	53	255
55–64	141	25	116
65+	13	0	13
<b>Grand Total</b>	<b>2,199</b>	<b>331</b>	<b>1,868</b>

**Employee Turnover**  
by age, 2020

	Total	Women	Men
18–24	406	69	337
25–34	652	110	542
35–44	493	84	409
45–54	382	76	306
55–64	477	72	405
65+	213	26	187
<b>Grand Total</b>	<b>2,623</b>	<b>437</b>	<b>2,186</b>

## Benefits Provided to Full-Time Employees

Over 99.7% of PCA employees are full time and work in the United States.<sup>9</sup> PCA provides comprehensive health and welfare benefits to its employees, including participation in medical, dental and vision coverage plans, an employee assistance program, wellness screenings, flexible spending accounts, basic and supplemental life/AD&D insurance, disability coverage and paid vacation. PCA provides medical and parental leave in accordance with U.S. laws. Examples of benefits include:

- Health Care:** The following plans are offered to salaried and hourly employees:
- **Medical Plans** and prescription plans with different employee cost and benefit levels that meet the varying needs of our employees.
  - **Dental** coverage designed to place emphasis on preventive treatment, while providing assistance on more serious conditions.
  - **Vision** coverage that provides discounts on glasses and contact lenses, in addition to providing coverage for routine eye exams.
  - **Flexible Spending Accounts** that allow employees to use tax-free dollars to pay for eligible out-of-pocket healthcare or dependent care expenses.
  - **Health Savings Account** available for those who enroll in the company high-deductible medical plan option and offers a tax-free way to save for future healthcare expenses.

<sup>8</sup> See our [Code of Ethics and Business Conduct](#) for additional information.

<sup>9</sup> In 2020 we had 19 part-time employees. We employed 14 people at our design center in Hong Kong and 25 people at our Hexacomb® location in Tillsonburg, Ontario.

**Employee Assistance Program (EAP):** This program is a resource to help employees with everything from checking off daily tasks, online advice, webinars and up to eight free mental health counseling sessions.

**Medical Guidance/Claim Assistance:** Third-party assistance with one-on-one support to help make informed decisions about any medical condition. In addition, experts can provide support with medical claims and billing issues.

**Wellness Screenings:** We have partnered with a third-party healthcare group to provide free, quick and confidential preventive health checkups at company location sites to eligible employees.

**Disability Coverage:** Long-Term Disability (LTD) and Short-Term Disability (STD) plans for salaried and hourly employees.

**Parental Leave:** Coverage allowed in accordance with the U.S. Family Medical Leave Act (FMLA).

**Vacation Days and Holidays:** Paid vacation and holidays are made available to all full-time employees.

**Retirement:** Both salaried and hourly employees are covered by a defined contribution plan and/or defined benefit plan. In addition, we have a third-party organization that provides advisory services for the defined contribution retirement plan to help save for and live in retirement. These services include retirement account evaluations and various online investment resources provided at no cost to the employee.

**Basic Life Insurance/Accidental Death & Dismemberment (AD&D):** Both life insurance and AD&D are provided at a value equivalent to 1.5 times the employee's annual salary. Business travel insurance is also available to many employees that travel on behalf of PCA.

**Supplemental Life Insurance/Supplemental AD&D:** Most employees will have options to add supplemental life insurance for themselves, spouses and children. In addition, most employees will also have an option to add supplemental AD&D for themselves or family.

**Stock Ownership:** Available as an option in several employee thrift plans, including PCA's primary defined contribution plans.

## Pandemic Relief Policy

PCA created a Pandemic Relief Policy (PRP), introduced in April 2020, which was in effect until June 30, 2021. The PRP covered employees affected by COVID-19 and offered the necessary time off due to a COVID-19 related illness or to take care of a family member recovering from COVID-19. The PRP was created and implemented following Centers for Disease Control and Prevention (CDC) guidelines and best practices. Employees were able to access the policy based on certain qualifying events and subject to official diagnosis, exposure and quarantine requirements.

The PRP provided 100% pay replacement for up to 14 days for sick or quarantined employees. The policy encouraged hourly production and maintenance employees to stay away from work when potentially contagious with the virus. The PRP proved to be effective in helping to protect PCA employees during the pandemic. By being proactive and allowing employees paid time off, we were able to keep our operations running. PCA employees who were impacted by COVID-19 returned back to work without a loss of pay or benefits during their absence, quarantine and recovery.

The Pandemic Relief Policy was used by **5,250 employees** for a total of **45,900 days** away from work.

### **Job Stability During COVID-19**

There has been high demand for corrugated products throughout the pandemic, which still remains. Due to this increase in demand, PCA has offered more overtime hours across our system of box plants. The majority of PCA's locations are unionized, subject to collective bargaining agreements covering employees' wages and hours. Overtime hours are subject to seniority and are considered desirable to more junior employees.

PCA did not implement furloughs or any other forms of pay suspension. PCA employees were not asked or directed to take unpaid or voluntary leave. Those employees who needed time off due to their personal illness or to take care of a family member related to COVID-19 were covered by the Pandemic Relief Policy that was created to offer a bridge between the first day of the illness and the start of the short-term disability benefits.

PCA offers its employees the flexibility of adjusting their work schedules whenever feasible and based on the business needs due to personal circumstances related to COVID-19.

### **Work-From-Home for Non-Essential Workers**

PCA allows certain non-essential employees the flexibility to perform their duties remotely.

### **Jackson Mill Temporary Shutdown**

The drastic decline in demand for white paper in 2020 led to the temporary shutdown of the main operations at the Jackson mill. PCA temporarily idled two paper machines and the sheet-converting operation for several months, resulting in the layoff of approximately 400 employees.

PCA paid full salaries to all laid-off employees for the first two months and then offered them the choice of drawing unemployment benefits or working at the mill to perform machine maintenance and deep cleaning. Simultaneously, PCA launched a three-year, \$440-million project to permanently convert No. 3 uncoated freesheet (UFS) paper machine to produce linerboard used for corrugated packaging.

After three months, PCA recalled all laid-off employees and began serving customers with the No. 1 paper machine dedicated to the white paper products while implementing stage one of the three-year conversion project.

### **Compensation During COVID-19**

PCA did not implement any pay reductions related to COVID-19. We continued paying gainshare bonuses to all qualified hourly employees and scheduled annual bonuses to salaried employees. PCA bonus plans are incentives beyond the annual salary for reaching certain predetermined goals. The purpose of these bonus plans is to provide recognition and appreciation to the employees for going above and beyond their normal work obligations.



## College Recruitment

PCA is making a focused investment in attracting and employing people with the right skills and expertise to build on our strong foundation of employee excellence. We recruit at numerous colleges and universities around the country, including:

State	College/University
<b>AL</b>	Auburn University University of Alabama University of South Alabama
<b>CA</b>	California Polytechnic State University
<b>FL</b>	Florida State University University of Florida
<b>GA</b>	Georgia Institute of Technology Kennesaw State University University of Georgia Valdosta State University
<b>ID</b>	University of Idaho
<b>IL</b>	College of Lake County DePaul University Loyola University Northern Illinois University Northwestern University University of Illinois at Chicago University of Illinois
<b>IN</b>	Purdue University
<b>LA</b>	Louisiana State University Louisiana Tech University McNeese State University University of Louisiana
<b>ME</b>	University of Maine
<b>MI</b>	Ferris State University Michigan State University Michigan Technology University Western Michigan University

State	College/University
<b>MN</b>	Iron Range Engineering University of Minnesota – Duluth University of Minnesota – Twin Cities
<b>MS</b>	Mississippi State University
<b>NC</b>	North Carolina State University
<b>ND</b>	University of North Dakota
<b>NY</b>	Rochester Institute of Technology
<b>OH</b>	Miami University
<b>SC</b>	Clemson University
<b>TX</b>	Lamar University Texas A&M University University of Texas – Tyler
<b>VA</b>	Virginia Polytechnic Institute and State University
<b>WA</b>	Central Washington University Eastern Washington University University of Washington Washington State University – Tri-Cities Washington State University
<b>WI</b>	University of Wisconsin – Eau Claire University of Wisconsin – Platteville University of Wisconsin – Stevens Point University of Wisconsin – Stout

## New Careers Microsite

PCA launched a new careers microsite with a series of employment branding videos. This microsite showcases the PCA brand by highlighting the success of the organization and our offerings through storytelling, clean functionality and intuitive user flow.

The goals were to create a modern and engaging site focused on improving the candidate experience and to increase brand awareness through videos showcasing the heart of PCA — our people — as well as the caring culture and growth opportunities that encourage them to thrive. The employment branding videos feature employees who demonstrate PCA’s values, articulating what differentiates us from other companies and why right-fit candidates should choose PCA.

Bringing this microsite to fruition required engagement with several stakeholders including executive sponsors, a steering committee, current employees and developers.

## Labor Relations

PCA's Labor Relations department supports our operations in employing a best-in-class workforce by ensuring our hourly employees are compensated at a fair market rate and are provided with competitive benefits.

### Communication Mechanisms

We provide multiple avenues for our employees to voice concerns or complaints so they may be addressed appropriately. Employees may contact a local supervisor or manager, their designated human resources (HR) representative, or our Vice President of Labor Relations directly if there is a Title VII concern. We also have a 24 hours per day, 7 days per week ethics hotline should employees wish to remain anonymous. Many of our locations are unionized, and every labor contract has a grievance clause.

For our packaging plants, we employ a team of HR professionals who support areas that constitute multiple local management teams. Because of the size of the operation, each of our mills has at least one dedicated HR professional. In all cases, these professionals aim to resolve problems at the source, engaging directly with whomever may have a grievance and working diligently to reach a resolution.

### Changes in Operations

Operational changes within PCA facilities are addressed in accordance with any collective bargaining agreements that are in place at that time for that location. These include:

#### Work Week and Work Start Times

Union labor contracts set the start of a work week and the normal work shift schedule.

#### Shift Schedule Changes

Employees seeking to select or change their work shifts may be allowed to do so based on collective bargaining agreements.

#### Weekend Overtime

Union labor contracts require an advance notice to employees scheduled.

#### Elimination of a Shift or Jobs

Bumping rights based on seniority and ability of affected employees may be allowed in union labor contracts.

PCA complies with U.S. law and, under the WARN Act, a 60-day advance notice is provided of any plant closings that are intended to be permanent and involve 50 employees or more. We also provide similar notice for any plant closures not covered by the WARN Act.

### Overtime Reduction Initiative

As a result of our biennial employee engagement survey, PCA partnered with the United Steelworkers (USW) to launch a pilot program in 2017 to reduce the overtime rate at the 26 plants whose hourly associates are members of their union. We began by providing USW with robust data on absenteeism, turnover and overtime. Working collaboratively with the USW, we identified new ways to achieve the productivity necessary to meet the needs of our customers without having to work excessive hours. Collectively these plants reduced their overtime by 4.4% between 2017 and 2020.

In 2020, overtime at these facilities increased 2.5% year over year after realizing a 9% decrease from 2017 to 2019. The COVID pandemic brought on challenges including increased absenteeism and pent-up demand for corrugated products due to business lockdowns, which had a direct impact on working hours. Without the pandemic, we would not have anticipated an increase in overtime year over year. However, given the circumstances, we believe our operations rose to the challenge and effectively managed overtime.





# Diversity, Equity and Inclusion

PCA employees are encouraged to do the right things for each other and foster a culture of caring and inclusivity. We embrace the fact that every person brings unique perspectives and experiences, which help PCA to work collaboratively to deliver exceptional customer experiences and position us as a market leader.

We are proud to be an equal opportunity workplace and an affirmative action employer.<sup>10</sup> We strive to be an employer of choice and are establishing a Diversity, Equity and Inclusion Council to hone our strategy, create a roadmap for inclusive leadership and set goals for the organization. Key focus areas of this council will also include talent acquisition and development, community engagement and cultural alignment.

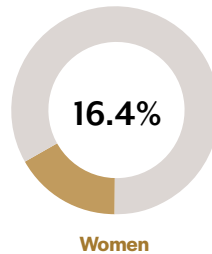
As an ideas and solutions company, we believe it is essential to hire and promote diverse candidates and employees. This begins with employee engagement — as well as enhancing our leaders’ skills in empathy, listening and interpersonal communication — and providing education and training to avoid unconscious bias. We succeed through our people, who are highly engaged and results-oriented, operating in an entrepreneurial culture.

## Diversity of Governance Bodies and Employees

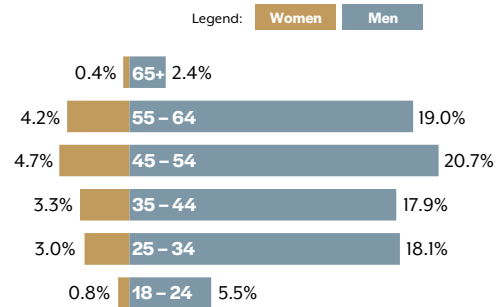
PCA’s Board of Directors has adopted a policy under which it will actively seek out qualified diverse candidates for consideration when seeking new directors.<sup>11</sup>

### Employee Population

PCA is committed to developing, promoting and maintaining a culture and environment of respect and inclusion.

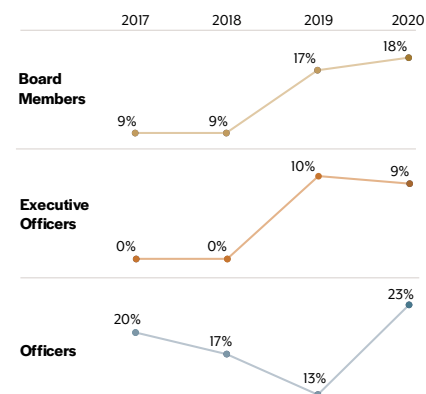


Data presented for calendar year 2020, as of 12/31/20



Board Members	Women	Men
Over 50 years old	2	9
Executive Officers	Women	Men
30–50 years old	—	2
Over 50 years old	1	8
Officers	Women	Men
30–50 years old	2	4
Over 50 years old	5	19

### Percent of Board Members, Executive Officers and Officers Who Are Women



<sup>10</sup> PCA has long held an Equal Employment Opportunity and Affirmative Action policy that all salaried employees are required to affirm adherence to each year.

<sup>11</sup> Nominating and Governance Committee Charter

**The cornerstone of our business is the strong relationship between our customers and our people.** The first step in building strong relationships is listening. We realize that the key to offering responsive customer service is never taking our customers for granted, so we actively seek to improve our understanding of their business and how we can support their growth with our products and services. We do what's right for our customers, not what's easy. Our simple rule at PCA is: We do the “hard to do.”

For this key stakeholder group, our assessment gauged significance by the number of customers who are managing a particular topic because it is material to their business. We conducted research on 45 of our largest customers by analyzing public information related to sustainability and social responsibility.

We found that our customers are concerned about climate change. Many are putting forth significant efforts to reduce their impact in their own operations, and they are seeking to influence their suppliers to do the same. They also care significantly about the sustainability of the products we provide. We've known for decades that it's not just about the materials we use, but how we source them and from where. Our customers want to know that materials in their value chain were procured responsibly and sustainably with minimal impact to the environment and society.

Topics in this section are reported in order of significance in the eyes of our customers, because if something is important to them, it is important to us. At PCA we put the customer at the top of the organizational chart. We work to ensure that the “voice of the customer” resonates through all of PCA's operations.

# customers

**Climate Change**

**Energy**

**Emissions**

**Raw Material Sourcing**

**Biodiversity**

**Water and Effluents**

**Waste**

**Procurement Practices**

## Climate Change

Many of our stakeholders consider climate change to be the most pressing long-term issue facing our planet. “Climate action failure” has been consistently perceived as a top risk in both likelihood and impact by respondents of the Global Risks Perception Survey, presented annually in The World Economic Forum’s *Global Risks Report*.<sup>12</sup> According to the World Meteorological Organisation (WMO), climate change is accelerating: The years 2015–2019 was the warmest five-year period since 1981, ocean acidification is increasing, oceans are getting warmer, sea levels are continuing to rise and sea ice continues to melt.<sup>13</sup> The National Aeronautics and Space Administration (NASA) supports these findings and provides accessible resources to monitor the impacts and science of climate change through their website.<sup>14</sup>

The data is compelling, and many of our customers have recognized the urgency by setting goals to reduce their greenhouse gas emissions. Some have set contextual or science-based targets for 2030 and beyond. Despite the pessimistic outlook often presented about our climate, we believe PCA is well positioned to continue to demonstrate our resilience in the face of any major global event. This is primarily due to the will and exceptional abilities of our people, the substantial investments we have already made in reducing our environmental impact, our agility and responsiveness in the marketplace and our conservative financial approach. PCA is uniquely positioned to serve our customers today and well into the future.

### Climate and Other Related Risks and Opportunities

PCA’s strategy to develop packaging solutions from renewable resources that are manufactured predominantly with renewable energy and are recyclable at end-of-life is a trifecta for sustainability. With 100% of our fiber coming from renewable sources, greater than 60% of our energy from carbon-neutral sources and the corrugated recycling rate regularly exceeding 90% in the U.S., we are proud of what we have achieved to date. But we recognize that we need to continue to make progress. Our Sustainability team monitors developments in technology, the scientific community’s understanding of climate change, economic conditions, and consumer perceptions and behavior to understand emerging risks and opportunities for our company related to climate change.

#### Recyclable and Renewable Packaging

Most major consumer packaged goods (CPG) companies have stated goals to source more sustainable packaging in response to concerns such as ocean plastic and litter and a desire to reduce greenhouse gas emissions in their supply chains. While the definition of “sustainable packaging” may vary from company to company, wood fiber used in our boxes is both recyclable<sup>15</sup> and renewable by every definition. Corrugated packaging works to protect the investments of our customers in the manufacture and transport of their products, both economically and environmentally, as they are distributed around the world.

<sup>12</sup> [WEF.The.Global.Risks.Report.2021.pdf \(weforum.org\)](#)

<sup>13</sup> [Five\\_year\\_report\\_2015-2019\\_0.pdf \(ane4bf-datapl.s3-eu-west-1.amazonaws.com\)](#)

<sup>14</sup> [climate.nasa.gov](#)

<sup>15</sup> Certain add-ons to our products like wax or other coatings, and certain applications with direct product contact where residues are left behind may render a package to not be recyclable.

### Workability

The primary and most likely effect of climate change is extreme weather events, including extreme heat and humidity. In certain parts of the world, this is likely to cause reductions in working hours. Projections based on RCP8.5,<sup>16</sup> which predicts average global warming of 2.3°C by 2050, indicate it is unlikely for extreme heat and humidity to pose any greater threat to working hours in 2030 than they do today in our areas of operation. The primary activity evaluated for impact was harvesting activity occurring in the U.S. Southeast, Midwest and Pacific Northwest, where our mills are located.

### Land Use Changes Due to Sprawl

U.S. forests have been a net sink for carbon since at least 1990, offsetting roughly 9% of U.S. greenhouse gas emissions as of 2016.<sup>17</sup> In the United States, land development outpaces population growth of urban areas. This phenomenon, known as urban/suburban sprawl, is a leading cause of deforestation in the U.S. and is prevalent across the nation as families seek larger, more affordable homes farther from city centers. This causes net additions of greenhouse gases due to greater use of automobiles by residents and less forest and prairie lands to sequester carbon, among other factors.

Sprawl causes fragmentation of natural landscapes, which results in both ecological and economic impacts. For PCA, sprawl present in our supply areas could cause longer hauling times for wood, either due to distance or traffic, and could result in net additions of greenhouse gas emissions from transportation.

### Competition From the Wood Pellet Industry

Many nations are attempting to reduce their carbon footprint in response to climate change. The UK, Belgium and others are turning to U.S. forests for wood pellets, which are combusted for bioenergy and used in place of higher-emitting fuels. As this sector increases their pulpwood consumption footprint in the U.S. Southeast, it could impact wood cost.

### Extreme Weather Events

Extreme weather events like hurricanes, tornadoes, derechos, floods and winter storms have caused disruptions to businesses both directly and indirectly in recent history. As the planet warms, the frequency and intensity of these events are likely to increase. Certain weather events may cause damage to our facilities and require us to temporarily halt operations. These types of events may also disrupt our suppliers' operations and their ability to transport materials to our facilities. Disruptions to the supply chain may cause the cost of goods to temporarily increase. Damage to our facilities may cause insurance premiums to increase and also require us to incur additional costs to mitigate future risks.

All of our grades of containerboard and white paper can be produced at multiple mills in case of temporary outages, and all of our corrugated facilities have plans in place to leverage our network of box plants in case of an emergency. This ensures that we can continue to supply our customers with products. However, for both paper and corrugated products, this may also increase costs due to differences in capabilities of facilities and increased transportation distances.

<sup>16</sup> RCP8.5 is a Representative Concentration Pathway used to model the effects of greenhouse gases on the earth's climate. It is considered a worst-case or high emission scenario.

<sup>17</sup> <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2016>

## Carbon Neutrality Team

PCA has established a Carbon Neutrality Team (“the Team”) responsible for developing and implementing our strategy to become a carbon-neutral company. In the interim, this team will lead PCA in support of the AF&PA 2030 goal to reduce total scope 1 and 2 emissions intensity by 50% from a 2005 baseline.

We have been reporting our greenhouse gas (GHG) emissions through the CDP Climate Change Questionnaire and through our Responsibility Report since 2018, and we have well-established processes for compiling our GHG emissions inventory. The Team is responsible for:

- Educating PCA management and expanding awareness at each of our mills by designating a site Carbon Neutrality Lead.
- Developing CO<sub>2</sub> emissions models for each of our mills.
- Identifying easily achievable short-term projects to lower emissions.
- Evaluating our capital processes to promote carbon consideration for all future projects.
- Creating targets for carbon reduction and establishing long-term goals.
- Communicating results to stakeholders.

The Team is cross-functional and includes members from technology, operational, sustainability and environmental roles. The Team is sponsored by PCA’s Senior Vice President — Corporate Engineering and Process Technology, who is responsible for communicating our progress to our Board of Directors.

## Energy

Improving energy efficiency and expanding our use of renewable sources is the central component of our sustainable energy strategy. Much of our focus has been on utilizing biofuels, which are byproducts of our manufacturing process, predominantly wood waste (bark) and black liquor solids. We also purchase supplemental fuels, some of which are also carbon neutral.

Mill energy usage is tracked and compared to internal and external benchmarks on a routine basis. Energy benchmarks for individual unit processes within a mill are tracked and compared with historical usage and targets. Energy usage is discussed in daily production meetings, and systems are in place for operators and managers to evaluate usage and pricing data in real time. Decisions can then be made on how to operate our mills most efficiently and economically based on current energy information.<sup>18</sup>

### Combined Heat and Power (CHP) and Self-Generated Electricity

The majority of our mills utilize CHP processes wherein high-pressure steam is routed to steam turbines to generate electricity on-site. Subsequently, exhaust steam from the turbines is utilized for both pulping and papermaking processes. Two of our mills, Tomahawk, Wisconsin, and International Falls, Minnesota, also self-produce and utilize hydroelectricity.

### Energy Reduction

Through significant strategic investments, our mills have improved their energy efficiency by replacing fixed speed with variable speed electrical drives. Over the past decade, several PCA mills have increased capacity for biogenic fuel types and replaced coal with lower-emitting fuels like natural gas.

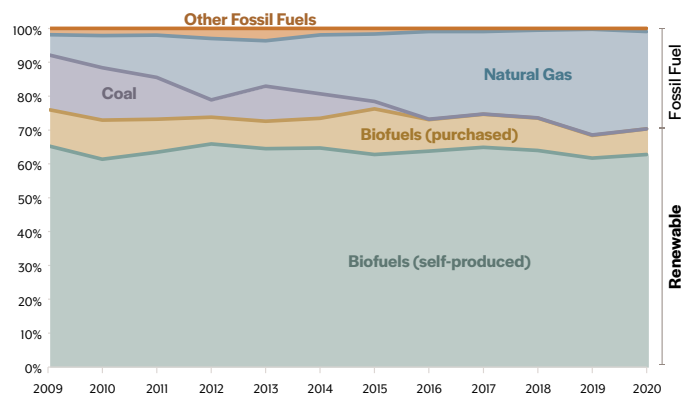
#### Mill Energy by Fuel Type

PCA mills predominantly use biogenic fuels to power stationary equipment.

Additionally, we invested in our mill system to combust lower-emitting fossil fuels like natural gas in place of coal.

In 2009 coal made up 16% of mill direct energy, compared with 0% in 2020.

*Note: DeRidder and Wallula mills data included as of 2015, Jackson and International Falls mills as of 2016.*



### Energy Modeling

All PCA mills have a computer model of their energy system, which is used to identify energy reduction opportunities. Multiple smaller capital projects are identified by the model and executed each year at all mills. When any capital project is identified, the model is used to determine the optimum energy balance for the new installation and to quantify the benefit of the project after it is installed. Mill and corporate personnel work together so that opportunities identified at one mill may be quickly implemented at other mills.

<sup>18</sup> Packaging plants account for less than 5% of our total energy consumption – they predominantly utilize purchased electricity and natural gas. Our full-line plant boilers combust natural gas to produce and supply steam to corrugators as well as for building heat.

## Examples of Capital Investment in Energy Improvements

### Tomahawk

We built an enclosure over the wastewater treatment lagoon at our Tomahawk medium mill to facilitate the capture of methane gas, which is used as fuel for our boilers, while reducing greenhouse gas emissions. This generates an average 108,500 GJ of biogenic, carbon-neutral energy per year, which is enough to power 2,745 U.S. homes.<sup>19</sup>

### International Falls

We installed a turbine generator that increased our rate of electrical self-generation by 595,000 GJ of energy per year. This is the equivalent electrical consumption of 15,120 homes — or five times the number of households in the entire city of International Falls.

### Counce and Valdosta

We upgraded our recovery boiler and turbine generator assets to increase the use of internally generated wood waste and black liquor as energy sources to increase our capacity to self-generate electricity. These projects substantially increased energy efficiency. This investment added approximately 3 million GJ of biogenic, carbon-neutral energy to our portfolio, which enables the mills to reduce consumption of fossil fuels.<sup>20</sup> It would require over 2,800 acres (or 4.4 square miles) of solar panels to generate this same level of renewable power.<sup>21</sup>

### Filer City

We recently installed a bubbling fluidized bed boiler to combust wood waste (previously shipped off-site) and other fuel types. This investment added 888,000 GJ of biogenic, carbon-neutral energy, and it allows the mill to reduce consumption of fossil fuels. Also, 10% of the boiler’s fuel supply comes from used passenger vehicle tires. For every full year of operation, over 790,000 tires will be converted into recovered, useful energy.

### Energy Consumption

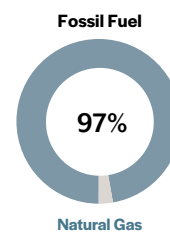
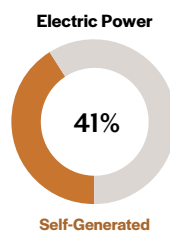
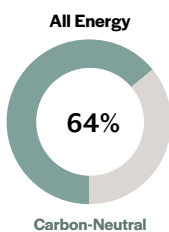
Within and Outside of the Organization (million GJ)

	2016	2017	2018	2019	2020
Renewable Fuel	73.1	72.9	73.3	72.6*	70.8
Non-Renewable Fuel	30.4	27.8	30.6	32.6	29.9
Electricity and Steam	9.4	9.0	9.7	9.8	9.4
Hydroelectricity	0.3	0.4	0.3	0.3	0.3
<b>Total</b>	<b>113.2</b>	<b>110.1</b>	<b>113.9</b>	<b>115.3</b>	<b>110.4</b>

\*Energy from renewable fuel was underreported in 2019 by 2.02 million GJ, or 1.7% of the revised total.

### Energy Performance Metrics

All locations, 2020



<sup>19</sup> Based on U.S. EIA 2018 average annual electricity consumption of 10,972 kWh.

<sup>20</sup> Based on the difference in average energy production from biogenic fuels before the project (2005–2011), and since the project (2012–2019).

<sup>21</sup> 2013 National Renewable Energy Laboratory (NREL) report, based on Large PV generation-weighted average land use, 3.4 acres/GWh/yr.

## Emissions

PCA is one of the largest producers of containerboard, corrugated packaging products and business paper in the United States. The scale of our production requires significant amounts of energy and resources. Much of these energy requirements are at our pulping and papermaking operations. These needs are met in large part via electric and steam self-generation and leveraging combustion of renewable, current-carbon, biogenic fuels. While doing so creates greenhouse gas emissions, the majority are reported as biogenic CO<sub>2</sub> production and accordingly do not contribute to PCA's carbon footprint. However, combustion of biomass does result in net additions of methane and nitrous oxide to the atmosphere. Emissions of these pollutants are included as part of our scope 1 emissions.

### Greenhouse Gas Emissions Inventory and Accounting

Today we track all direct (scope 1),<sup>22</sup> indirect (scope 2) and the vast majority of applicable other indirect (scope 3) emissions at our mills and packaging plants for which we have operational control.<sup>23</sup>

#### Greenhouse Gas Emissions

Direct, Indirect and Other Indirect (million metric tons CO<sub>2</sub>e)

	2016	2017	2018	2019	2020
Scope 1	1.94	1.84	1.94	2.03	1.75
Scope 2 (location-based)	1.38	1.34	1.28	1.22	1.08
Scope 2 (market-based)	-	-	-	-	1.36
Scope 3	-	-	1.10	1.16	1.04
<b>Total (location-based)</b>	<b>3.32</b>	<b>3.18</b>	<b>4.32</b>	<b>4.41</b>	<b>3.87</b>
<b>Total (market-based)</b>	-	-	-	-	<b>4.15</b>
Biogenic CO <sub>2</sub>	6.54	6.52	6.55	6.47	6.33

Notes: We are restating our biogenic CO<sub>2</sub> emission from 2019, which was underreported by 180,000 metric tons CO<sub>2</sub>e. We are restating our scope 3 emissions for 2018 and 2019, which were underreported by 100,000 metric tons and 150,000 metric tons, respectively. This was due to a unit of measure error in one of our scope 3, category 1 sources. In 2020 PCA had 1,067 metric tons CO<sub>2</sub>e emissions from unrecovered refrigerant. (Refrigerants included: HFC-32, HFC-134a, HFC143a, and HFC-227ea). Reductions in scope 1 + 2 emissions year over year were due to the idling of our Jackson mill from May–Sept 2020.

We compile our greenhouse gas inventory following the World Resources Institute and World Business Council for Sustainable Development Greenhouse Gas Protocol for Corporate Accounting and Reporting with the help of Schneider Electric's sustainability data management platform, Resource Advisor™, which we have utilized since 2013. In 2018, we moved to full implementation of invoice collection and data scraping at all of our packaging plants. In 2019, we added our containerboard mills and, in 2020, we added our white paper mills, supply services facilities and fulfillment centers. We utilize invoice data for electric power, natural gas, propane and solid waste disposal, in addition to other minor sources contributing to our footprint. Where invoice data was not readily available, manually reported data was applied, and estimations were made for the small percentage of remaining gaps based on consumption patterns within a plant or of like plants.

<sup>22</sup> Greenhouse gas emissions from company-owned landfills are reported on a one-year lag due to the complex nature of the calculation and the length of time required for data aggregation necessary for computation.

<sup>23</sup> In 2018, we began tracking emissions for our regional, in-house trucking fleet, our corporate headquarters and our technical center. In 2020 we began tracking emissions for our supply services and fulfillment centers.



## Global Warming Potential

For our 2020 inventory, we began using the most recent Intergovernmental Panel on Climate Change (IPCC) Assessment Report, AR5. Changes in global warming potential include from 25 to 28 for methane (CH<sub>4</sub>), and from 298 to 265 for nitrous oxide (N<sub>2</sub>O). By pollutant, CO<sub>2</sub> accounts for 99% of our greenhouse gas emissions, and therefore the change has an insignificant impact on our inventory. All data prior to 2020 was reported using AR4 GWP and was not recalculated. We continue to use a 100-year time horizon.

## Scope 2 Market-Based

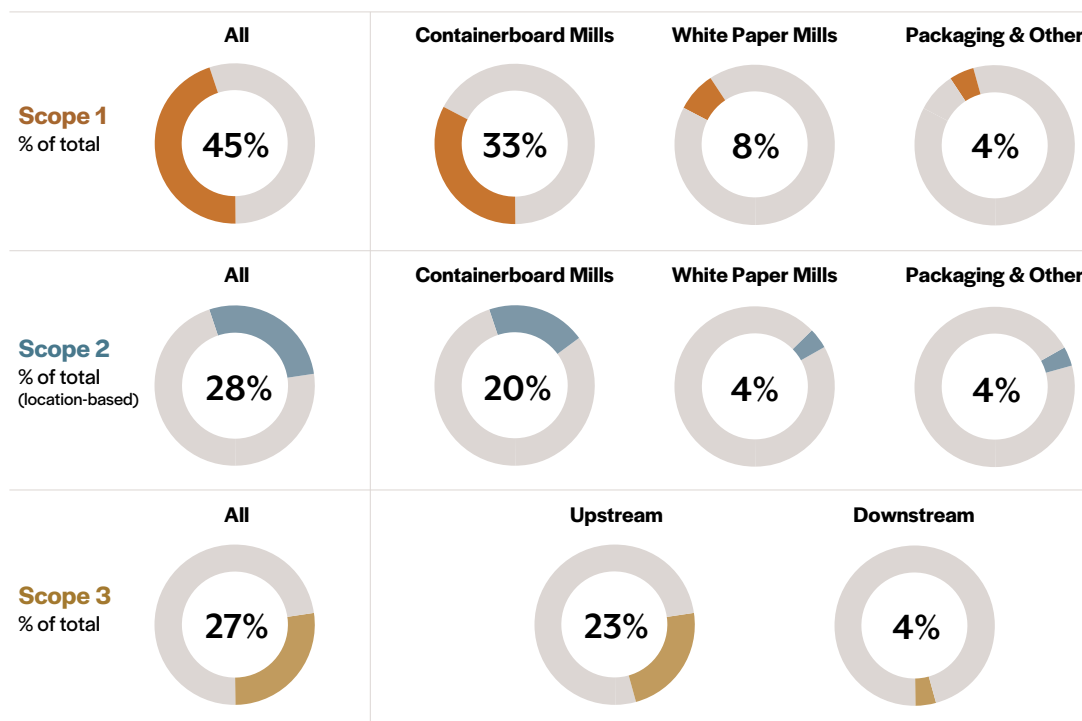
This is the first year we are reporting a scope 2 market-based inventory in addition to our location-based inventory. Our inventory includes market-based emission factors for all of our mills, which are our largest purchasers of electricity from the grid. We are currently unable to procure emission factors for several of our converting facilities in smaller energy markets. For locations without a market-based emission factor, their location-based factor was used. Less than 5% of our total scope 2 market-based emissions by volume used a location-based factor.

## Scope 3 Inventory

In 2019, we made significant strides to expand our scope 3 inventory. Our inventory includes the following upstream categories: purchased goods and services, capital goods, fuel- and energy-related activities, upstream transportation and distribution, waste generated in operations, business travel and employee commuting. It also includes downstream transportation and distribution.

### Breakdown of Greenhouse Gas Emissions by Scope, Location Type/Classification

2020



## Life Cycle Assessment (LCA) of Products

For both our corrugated and paper products, we provide data to our trade associations to conduct life cycle assessments for the entire industry. The most recent LCA for corrugated products was published in 2017 (using 2014 data). The industry average corrugated product had a global warming potential of 0.533 kg CO<sub>2</sub>e per kilogram of corrugated.<sup>24</sup>

The most recent LCA for printing and writing paper products was published in 2010 (using 2006/2007 data). The industry average ream of office paper had a global warming potential of 4.25 kg CO<sub>2</sub>e per ream.<sup>25</sup>

### Greenhouse Gas Emissions Intensity

2020 (metric tons CO<sub>2</sub>e/ton of product)

Containerboard Manufacturing	Containerboard Transportation	Corrugated Manufacturing*	Corrugated Transportation	White Paper
Manufacture of containerboard (scope 1 + 2 of containerboard mills/ton of containerboard)	Transportation by truck and rail from containerboard mills to converting facilities (scope 3 containerboard transportation/ton of containerboard)	Combining and converting of containerboard into corrugated product (scope 1 + 2 of full-line operations/ton of corrugated product)	Transportation by truck from converting facilities to customer locations (scope 3 corrugated transportation/ton of corrugated product)	Manufacture and converting of white paper products (scope 1 + 2 of white paper mills/ton of uncoated freesheet)
0.47	0.02	0.11	0.02	0.70

\* Intensity figure based on PCA full-line operations only, to include both combining and converting.

Notes: Reporting of containerboard/corrugated is split into distinct parts to provide our customers with ultimate flexibility depending on whom they would like to compare PCA products with, as well as considering transportation where our accounting may overlap in scope 3. • Scope 2 location-based inventory was used for all reported intensities.

## Air Emissions

We calculated nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) and Particulate Matter 10 (PM<sub>10</sub>) based on emission factors derived from stack testing and/or from our Continuous Emissions Monitoring Systems (CEMS). These factors are used to calculate our emissions based on the type and volume of fuel we combust and the efficiency of our control equipment. Due to our increased use of natural gas in favor of coal, our power boiler SO<sub>2</sub> emissions have decreased by more than 99% in the past decade.

### Air Emissions

Mills (thousand metric tons)

	2016	2017	2018	2019	2020
Nitrogen Oxides (NO <sub>x</sub> )	6.7	6.4	6.4	6.6	6.0
Sulphur Dioxide (SO <sub>2</sub> )	1.9	2.0	1.4	1.5	2.1
Particulate Matter 10 (PM <sub>10</sub> )	-	-	-	1.6	1.0

Note: 2019 was our first year reporting Particulate Matter 10.

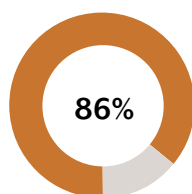
<sup>24</sup> Using the flow accounting approach. For an executive summary of the 2017 corrugated LCA, please visit [corrugated.org](http://corrugated.org).

<sup>25</sup> Using the flow accounting approach. For an executive summary of the 2010 printing and writing paper product LCA, please visit [afandpa.org](http://afandpa.org).

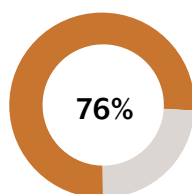
## Raw Material Sourcing

Wood fiber is a renewable resource and the essential material used to make our products. PCA's mill system utilizes both first-use (virgin) fiber and recycled content. First-use fiber is sourced almost exclusively from the United States, with less than one percent sourced from Canada (Ontario and Manitoba) by our International Falls white paper mill. Our white paper mills also source a small amount of market pulp. In 2020, we sourced approximately 4,000 tons of PEFC-certified virgin eucalyptus pulp from Brazil at our Jackson, Alabama, mill due to impacts from the COVID-19 pandemic. We procure wood from timberland, both private and public, in the form of roundwood and in-field chips. We also procure residuals from sawmills in the form of chips and sawdust.

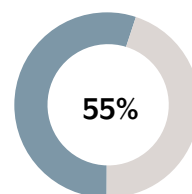
**Percentage of Directly Sourced First-Use Fiber From Private Landowners**



**Percentage of First-Use Fiber From Roundwood and In-Field Chips**



**Percentage of Recycled Content Classified as Post-Consumer**



All PCA Mills

Responsible and sustainable procurement of fiber is both a key policy and principle at PCA. PCA's commitment to practicing and supporting sustainable forestry and responsible wood fiber procurement is communicated both internally and externally. Internally, our Sustainable Forestry Policy is required to be posted at all manufacturing sites as part of our certification program, and it is also readily available on our company intranet. Externally, all PCA-approved wood suppliers receive our policy through an annual correspondence. Prior to delivery, we make sure that suppliers are adequately insured and incorporated and are able to meet our terms. Once approved and a purchase order has been submitted, PCA woodlands managers and foresters verify the accuracy of the information. Our wood management system tracks and catalogs details of our wood and fiber sourcing, including county of origin. PCA's policy is incorporated by reference in our Terms and Conditions for the Purchase of Wood Fiber Goods in every transaction and is available on our website.<sup>26</sup>

### Sources of Wood Fiber

(thousand tons)

	2016	2017	2018	2019	2020
First-Use Fiber (green tons)	14,234	14,439	14,668	15,021	<b>13,933</b>
PEFC Certified	26%	27%	26%	26%	<b>28%</b>
FSC Certified	3%	5%	4%	4%	<b>5%</b>
FSC Controlled Wood	19%	19%	70%	70%	<b>67%</b>
Recycled Content	967	1,013	1,083	1,053	<b>994</b>
Market Pulp	4	5	4	6	<b>18</b>

Note: All data in thousands of air-dried short tons, except for first-use fiber, which is reported as thousands of green short tons.

<sup>26</sup> <https://www.packagingcorp.com/addendum-for-wood-fiber-goods>

# customers

Our packaging plants source containerboard (linerboard and corrugating medium) and corrugated sheets. The majority of our containerboard comes from PCA mills or trade partners. To ensure that our containerboard and sheets come from non-controversial sources, all containerboard sourcing is controlled centrally by PCA's Containerboard Sales department (CBS). Sheet purchases are only allowed from CBS-approved vendors. All suppliers are evaluated as part of our due diligence system and risk assessment.

## Due Diligence System and Risk Assessment

PCA uses a due diligence system in conformance with the Sustainable Forestry Initiative<sup>®</sup> (SFI) and Programme for the Endorsement of Forest Certification (PEFC)<sup>27</sup> standards to avoid controversial sources in our supply chain. Each year we evaluate the contiguous United States and Canada for all of our operations that source wood fiber. Additionally, all of our mills have successfully audited to the Forest Stewardship Council<sup>®</sup> (FSC<sup>®</sup>)<sup>28</sup> U.S. Controlled Wood National Risk Assessment (NRA) and FSC Canada Controlled Wood NRA.<sup>29</sup> These efforts help ensure that we avoid sourcing conflict timber or otherwise illegally harvested wood, genetically modified forest-based organisms, species that are included in Appendices I to III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and wood from land converted to other vegetation types.

We evaluate our sources at both the origin (country) level and supply chain level, as well as the effectiveness of social laws. The U.S. and Canada both have effective social laws, relatively strong law enforcement and low levels of corruption. For these reasons, our 2020 assessment determined there is negligible/low risk that PCA supplies originate from controversial sources. The FSC U.S. NRA identified 11 mapped areas of specified risk for high conservation values within PCA's supply area. More details on our mitigation options and conservation partners that we selected are provided in the Biodiversity section of this report.

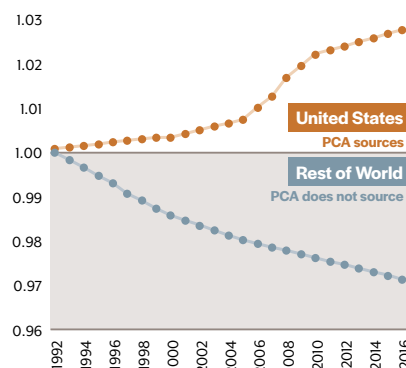
## Zero Deforestation

PCA sources the majority of first-use fiber from private landowners, which is consistent with the broader forest products industry. This is important because healthy end markets for timber are part of what keeps these lands forested. Without appropriate economic incentives like timber grown for harvest, landowners may elect to convert to different land uses such as human food agriculture and livestock, which are the leading causes of deforestation globally.<sup>30</sup> Additionally, PCA takes steps to mitigate risks when sourcing from specified counties that have a higher risk of conversion due to urbanization.

Deforestation is a significant issue in many parts of the world. Between 1992 and 2016, the world lost roughly 327 million acres of forestland. Conversely, during the same time period, the United States added 19.3 million acres of forestland. According to the U.S. Department of Agriculture, between 1953 and 2017, the amount of standing timber increased by 60%.<sup>31</sup>

### Forest Area (% of Land Coverage)

Index, 1992=1



Source: World Bank

<sup>27</sup> (PEFC/29-31-222) (PEFC/31-29-09)

<sup>28</sup> (FSC-C139165) (FSC-C020415)

<sup>29</sup> Only applicable to our International Falls, Minnesota, mill.

<sup>30</sup> <http://www.fao.org/state-of-forests/en/>

<sup>31</sup> U.S. Department of Agriculture, Forest Resources of the United States, 2017 (2019) [https://www.fs.fed.us/research/publications/gtr/gtr\\_wo97.pdf](https://www.fs.fed.us/research/publications/gtr/gtr_wo97.pdf) Table 31 page 164

# customers

## Certification

PCA has a fiber procurement program for all mills in compliance with the Sustainable Forestry Initiative® (SFI) 2015–2019 Standard Requirements, the Forest Stewardship Council® (FSC®)<sup>32</sup> and the Programme for the Endorsement of Forest Certification (PEFC).<sup>33</sup> We also recognize the American Tree Farm System® (ATFS) individual and group certifications. Our program ensures compliance with the certification standards and follows all applicable laws and regulations.

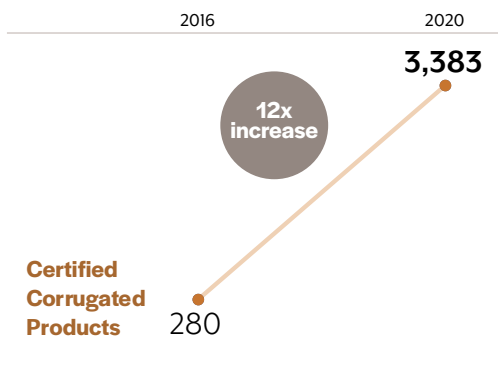
### Certified Chain of Custody

(thousand square feet, “MSF”)

PCA offers certified chain of custody corrugated products for customers who seek a higher level of assured sustainability.

As an integrated supplier, we are well prepared to meet our customers’ growing demand for certified product.

In 2020, we supplied 12 times the certified corrugated product we did in 2016.



All of our mills are certified to SFI®, PEFC and FSC chain of custody standards. All of our corrugated plants are certified to SFI and PEFC chain of custody standards. Our full-line packaging plants are also certified to the FSC chain of custody standard. At minimum, all PCA packaging plants are certified to SFI Certified Sourcing, including our Hexacomb® facilities.

### Certified Product Sold

(thousand tons)

	2016	2017	2018	2019	2020
<b>Corrugated</b>					
PEFC	17.1	61.8	167.3	174.9	<b>206.3</b>
<b>White Paper</b>					
FSC	61.4	95.2	126.6	116.5	<b>72.2</b>
PEFC	32.1	36.7	48.1	33.5	<b>27.1</b>
<b>Total</b>	<b>110.6</b>	<b>193.7</b>	<b>342</b>	<b>324.9</b>	<b>305.6</b>

Note: Corrugated output is measured in MSF and was converted to tons for reporting this metric in a common unit of measure for both segments.

## History of Certification

### 2005

PCA white paper mills certified to SFI Fiber Sourcing standard.\*

### 2007

All of PCA’s containerboard mills and corrugated packaging operations certified to SFI’s Fiber Sourcing standard, including Certified Sourcing.

PCA white paper mills certified to SFI, PEFC and FSC Chain of Custody, and FSC Controlled Wood standards.\*

### 2010

PCA’s containerboard mills certified to SFI and PEFC Chain of Custody standards.

### 2011

PCA’s entire system of corrugated packaging plants certified to SFI and PEFC Chain of Custody standards.

### 2018

PCA’s containerboard mill system certified to FSC Chain of Custody and Controlled Wood standards.

PCA’s entire system of full-line plants certified to FSC Chain of Custody standard.

### 2019

PCA containerboard mill system successfully audited to FSC U.S. Controlled Wood National Risk Assessment.

### 2020

PCA white paper mills successfully audited to FSC U.S. and Canada Controlled Wood National Risk Assessments.

\* Prior to PCA acquisition of Boise, Inc. in October 2013.

<sup>32</sup> (FSC-C139165) (FSCC020415)

<sup>33</sup> (PEFC/29-31-222) (PEFC/31-29-09)

# customers



## Recycling

Corrugated is the most widely recycled packaging material on the planet. To promote the recyclability of our products, PCA is a proud user of the *Corrugated Recycles* symbol and encourages our customers to print it on qualified products. Since the program was introduced, the recycling rate of corrugated has increased from 54.5% in 1993 to 88.8% in 2020, and it achieved a record of 96% in 2018.<sup>34</sup> Paper has a similar success story. Over the same time period, the recycling rate of paper and paperboard rose from 38.7% in 1993 to 65.7% in 2020, and it reached a record of 68% in 2018.

By recycling used paper, boxes and scrap from the manufacturing process, the amount of timber required to be harvested is reduced. This also serves to prevent greenhouse gas emissions from decomposition in a landfill.

However, there are limits to fiber recycling. Wood fibers can only be recycled five to seven times before they

become too short and brittle to bond any longer. *The Fiber Cycle Technical Document* published by Metafore in 2006<sup>35</sup> was updated by the National Council for Air and Stream Improvement (NCASI) in 2019 with current data. This document provides a model that takes into account the finite nature of fiber recycling and how long the cycle could continue without adding fresh fiber. Even when the recycled fiber utilization rate is maximized, the model shows that without the introduction of first-use fiber the North American containerboard supply would be exhausted in 13.5 months, and printing and writing grades would be exhausted in 1.5 months.

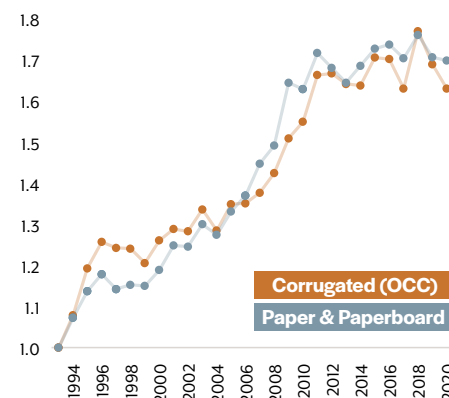
## A Global System

Global containerboard capacity was approximately 24% virgin fiber as of 2019. Anticipated increases in recycled capacity indicate a decrease in the proportion of first-use fiber to 21% by 2023.<sup>36</sup> First-use fiber utilized in our products is a valuable commodity to improve the health of the recycling stream, not only domestically, but also globally. The U.S. is one of the few significant contributors of long, softwood fiber to the global containerboard market. Beyond the approximately 29% of domestic recaptured old corrugated containers (OCC) exported annually,<sup>37</sup> consumer products are exported from the U.S. in boxes, which then become part of the importing country's fiber stream upon recovery. This fiber plays an important role in protecting forests in countries with high levels of deforestation from pulp and paper production — alleviating stress on forests while those nations develop sustainable forest management practices.

A sustainable fiber stream requires both first-use fiber and recycled content. PCA's role in maintaining this sustainable system is to supply first-use fiber, which is necessary to continue to make recovered fiber available and useful. It is also our role to provide end markets to growers of timber, so they are provided appropriate economic incentives to continue to grow trees that provide important ecosystem services during their lifetime.

## Increases in U.S. Recycling Rates

Index, 1993=1



Source: AF&PA, U.S. Census Bureau

<sup>34</sup> [https://www.paperrecycles.org/statistics/recovery-use-of-old-corrugated-containers-\(occ\)](https://www.paperrecycles.org/statistics/recovery-use-of-old-corrugated-containers-(occ))

<sup>35</sup> [https://twosidesna.org/wp-content/uploads/sites/16/2018/05/Metafore\\_-\\_The\\_Fiber\\_Cycle\\_Technical\\_Document\\_Summary\\_Report\\_2006.pdf](https://twosidesna.org/wp-content/uploads/sites/16/2018/05/Metafore_-_The_Fiber_Cycle_Technical_Document_Summary_Report_2006.pdf)

<sup>36</sup> Numera Analytics, 2019

<sup>37</sup> Net Exports: U.S. Census Bureau

## Recycled Content of Finished Paper Product

The recycled content of our finished products is calculated based on the proportion of recovered fiber to overall production after taking into account production yield for each stream. The average recycled content of our containerboard was 22% in 2020, the substantial majority in our corrugating medium. Our white paper division sells products under two brand names — ASPEN<sup>®</sup> and FIREWORX<sup>®</sup> — that specify a minimum percentage of post-consumer recycled content. This information is available through our Office Paper Product Finder on the Boise Paper website.<sup>38</sup>

## Product Stewardship

PCA has a robust product stewardship process to ensure all raw materials used in producing, manufacturing, packaging and transporting paper and containerboard products comply with the applicable product regulations, including FDA and USDA, along with any certifications PCA has made regarding customer requirements. The product stewardship process (for product and raw materials qualification) must be followed for all new chemicals/ingredients prior to use in PCA's processes. In addition, PCA utilizes third-party testing facilities for its products to test for chemicals of concern on an annual basis.

## Elemental Chlorine Free (ECF)

Our white paper mills do not utilize elemental chlorine gas in our bleaching processes. In addition, we ensure all virgin pulp suppliers use ECF bleaching. PCA's self-produced containerboard product is unbleached.

## Heavy Metals

The Coalition of Northeastern Governors (CONEG) created Model Toxics in Packaging Legislation, which has been adopted by 19 U.S. states.<sup>39</sup> To ensure conformance, we test our paper products on an annual basis to determine that the presence of incidentally introduced heavy metals — namely lead, mercury, cadmium and hexavalent chromium — does not exceed 100 parts per million. None of these heavy metals are intentionally added to our products.

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<sup>38</sup> <http://bph.boisepaper.com/product/>

<sup>39</sup> <https://toxicsinpackaging.org/the-clearinghouse/>

## Biodiversity

PCA has worked for decades with many types of landowners, especially family and small-scale landowners, providing them long-term sustainable forest management applications and education. Sustainably managed North American working forests are essential to PCA’s long-term success. Our responsibility and commitment is demonstrated by aligning our fiber sourcing program and practices with rigorous forestry, fiber sourcing and chain of custody standards including Sustainable Forestry Initiative® (SFI), Programme for Endorsement of Forest Certification (PEFC) and Forest Stewardship Council® (FSC®). Our program and practices are audited annually by respected, independent third-party auditors.

### Potential Impacts to Biodiversity and Ecosystems in North America

Supporting research and partnering in conservation efforts is essential to the practice of responsible fiber procurement and mitigating the known risks on forest ecosystems. We partner with the Forest Resources Association, The Nature Conservancy, Forest Stewards Guild, The Longleaf Alliance, Keeping Forests, American Forest Foundation and National Council for Air and Stream Improvement (NCASI) to accomplish research and support conservation objectives. PCA conducts annual training with staff on the latest research, conservation priorities, and company policies and procedures to broaden the practice of sustainable forest management and to reduce both direct and indirect negative impacts on biodiversity.

### Mitigation, Control Measures and Monitoring of High Conservation Values

In 2019, FSC released Controlled Wood National Risk Assessments for the U.S. and Canada.<sup>40</sup> For specified risks of High Conservation Values (HCV), the table below shows the applicable specified risks, the mitigation option and the partners we’ve selected for mills with impacted supply areas. The success of the HCV mitigation options in areas of specified risk are evaluated by FSC. The outcome of investing in support of these specified risks is that instead of avoiding the sourcing areas altogether and allowing them to deteriorate, we can play an active role in improving their health, which provides mutual benefits for many stakeholders.

HCV	Critical Biodiversity Areas (CBA) or Species	Mitigation Options	Partners
Species Diversity	Central Appalachian, Southern Appalachian, Florida Panhandle, Central Florida, Klamath Siskiyou, Dusky Gopher Frog	Conservation Initiatives, Education/Outreach, Implementation of Management Activities	<ul style="list-style-type: none"> <li>American Forest Foundation</li> <li>Forest Stewards Guild</li> <li>The Longleaf Alliance</li> <li>The Nature Conservancy</li> </ul>
Rare Ecosystems	Mesophytic Cove Sites, Native Longleaf Pine Systems, Late Successional Bottomland Hardwoods, Old Growth	Education/Outreach, Planning and Staff/Forester Training	

<sup>40</sup>The U.S. National Risk Assessment leveraged the International Union for Conservation of Nature (IUCN) Red List, NatureServe, USDA Forest Service and several state government resources, among others.



## Environmental Impact Assessments

We utilize NatureServe and state Natural Heritage websites to check for threatened or endangered species and ecosystem conservation priorities in combination with on-the-ground inspections prior to harvest activity. This enables us to ensure that biodiversity constraints are identified and that an effective plan of action is in place before, during and after forest management activity.

PCA fully complies with the U.S. Lacey Act, Endangered Species Act and the Clean Water Act. We also fully comply with the Canadian Environmental Protection Act, Species at Risk Act and provincial timber regulations. PCA is in full conformance with the European Union Timber Regulation (EUTR).

## Best Management Practices (BMPs)

The forest certification programs we adhere to support the protection of biodiversity through voluntary and compulsory measures. For example, the SFI standard requires a trained Master Logger or Qualified Logging Professional (QLP) on-site during harvest activities, and wood suppliers must remain up to date on continuing education requirements, including biodiversity protection. In 2020, 99% of the wood sourced directly from forestlands was delivered by QLPs.<sup>41</sup> PCA promotes and financially supports training programs for logging professionals as part of our commitment to sustainable forestry standards. We are dedicated to applying all mandatory and voluntary state best management practices (BMPs)<sup>42</sup> during harvest activity to protect a site's biodiversity and to preserve the quality of water and soil within the landscape.

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<sup>41</sup> Although it is a requirement of voluntary standards, there are limited exceptions granted, because we are not legally allowed to deter new loggers from gaining entry to markets. We require loggers to be enrolled in the next available QLP training course at a minimum.

<sup>42</sup> To view state BMPs, please see the interactive map at <https://www.stateforesters.org/bmps/>

## Water and Effluents

Pulp and paper manufacturing is a water-intensive process. We use either surface or ground water, depending on the location of the mill. Water withdrawal is measured with in-line flowmeters. Our mills intentionally reuse/recycle each gallon of water within the pulping and papermaking processes. We quantify water recycling using the *NCASI Water Recycle Tool*,<sup>43</sup> and determined our average water recycle ratio to be 7.8 in 2020. States issue permits for groundwater and surface water based on extraction volumes. We typically report to each state where we operate mills at least once a year.

### Water Risk Assessment and Due Diligence

We use the World Resources Institute (WRI) *Aqueduct 3.0 Water Risk Atlas*<sup>44</sup> to identify potential risks associated with our water supply. The assessment showed low risk for seven of our mills. Our Tomahawk, Wisconsin, corrugating medium mill assessment indicated high baseline water stress,<sup>45</sup> which we found surprising, as it does not reflect our experience. Therefore, we investigated further:

The Wisconsin River watershed is heavily regulated and has been managed for nearly 100 years. It is supported by 26 licensed dams in addition to 16 natural and 5 man-made associated reservoirs.

Given our century-long history of our Tomahawk mill operation, support of water conservation efforts and understanding of the watershed, we believe that the *Aqueduct Water Risk Atlas* output is suspect, suggesting a limitation of the model.<sup>46</sup> Additionally, our Tomahawk mill recycles more water than any of our mills; their water recycle ratio was 18.4 in 2020. Therefore, we find none of our mills to actually be in water-stressed areas that would necessitate reporting their withdrawal as such.

#### Water Withdrawal

by source (billion liters)

	2016	2017	2018	2019	2020
<b>Total</b>	<b>283.5</b>	<b>288.2</b>	<b>280.5</b>	<b>273.9</b>	<b>270.8</b>
Surface	68%	71%	70%	72%	73%
Ground	31%	29%	28%	27%	27%
Municipal	1%	<0.5%	1%	1%	1%

Note: Reporting of municipal water withdrawal at our packaging plants started in 2018. Data points may not add to 100% due to rounding.

### Valdosta Mill Water Conservation Plan

In accordance with the Georgia Environmental Protection Division's Water Conservation Rules, our Valdosta, Georgia, containerboard mill has had a water conservation plan in place since 2004. The mill strives for continued incremental reduction of water consumption to the extent practical through a broad water conservation strategy. This includes recycling, reclamation and reduction of use. The key performance indicator used to determine this program's effectiveness is gallons per ton of product. The mill's average process water use is 6,135 gallons per ton, which is below the industry average.

<sup>43</sup> <https://www.ncasi.org/technical-studies/sustainable-manufacturing/water-sustainability/water-reuse-recycle/>

<sup>44</sup> Default parameters were used.

<sup>45</sup> GRI recommends reporting a location's water withdrawal as stressed if the baseline water stress or baseline water depletion is rated "high."

<sup>46</sup> [World Resources Institute. \(2019\). Aqueduct 3.0: Updated Decision-Relevant Global Water Risk Indicators \(p. 11\)](#)

## Water Discharge

Mills essentially “borrow” water resources for manufacturing, subsequently returning virtually all water back to the environment.<sup>47</sup> In 2020, PCA mills consumed 2% of water withdrawn, or about 1,110 liters per ton of production. Water is returned in two primary ways, depending on its use at the mill.<sup>48</sup> Non-contact cooling water (NCCW), used to cool energy turbines and lubrication systems during warm months, is returned without treatment. Process wastewater is treated in on-site wastewater treatment plants prior to being discharged to a river or lake. At all of our mills, treated wastewater is tested for biological oxygen demand (BOD) and total suspended solids (TSS) prior to discharge. In addition to BOD and TSS, other parameters are tested in accordance with state-specific requirements. Each month, results are reported to state governments to verify we are operating within our permit limits.

### Water Discharges

Mills (billion liters)

	2016	2017	2018	2019	2020
<b>Total</b>	<b>268.8</b>	<b>270.0</b>	<b>252.4</b>	<b>271.9</b>	<b>275.0</b>
Process Wastewater	75%	73%	82%	77%	<b>76%</b>
NCCW	25%	27%	18%	23%	<b>24%</b>

Note: Evaporative water loss calculated for 2019 was 2.3%.

### Water Discharge Quality

Mills (lbs/ton of production)

	2016	2017	2018	2019	2020
Biological Oxygen Demand (BOD)	1.65	1.69	1.88	1.38	<b>1.54</b>
Total Suspended Solids (TSS)	2.59	2.81	3.24	2.42	<b>2.37</b>

## Stormwater Management Initiative

The majority of PCA packaging plants are subject to state stormwater permit programs. A stormwater permit requires a detailed stormwater pollution prevention plan (SWPPP), along with periodic inspections and stormwater sampling/monitoring, reports to state agencies, annual fees and annual training. The PCA corporate Environmental Health and Safety (EH&S) teams established a goal in 2016 for the packaging plants to pursue stormwater No Exposure Certifications (NEC) offered by various state programs. Over the past four years, PCA plants have built on the previously attained and audited Good Manufacturing Practices (GMPs) achieved over the prior decade. Further improvements include storing all oil and chemicals indoors and reducing pollutants in stormwater discharges. PCA has invested significant time and capital dollars where necessary to help plants attain the goal where feasible. Since 2016, the number of PCA facilities achieving NEC status has more than doubled. Currently, 46 box plants have achieved the rigorous management standards and achieved NEC coverage.

As a best management practice, NEC plants conduct thorough monthly inspections with a site-specific checklist and annual NEC training. The success of the program reflects dedication to environmental excellence by the PCA plant and corporate personnel, as well as improved environmental performance, reduced compliance costs and reduced risk of spills at PCA packaging plants.

<sup>47</sup> National Council for Air and Stream Improvement. (2018). [Water Profile of the U.S. Forest Products Industry](#).

<sup>48</sup> Due to geographic location, International Falls operates a fully enclosed, UNOX system, (an anaerobic reactivated sludge system) for wastewater treatment. Wastewater treatment plant residuals from this system are subsequently dried and combusted as a biofuel. A fraction of one percent of Valdosta’s treated wastewater is land applied to manage wastewater treatment system hydraulic inventory during drought events. Valdosta and International Falls both draw municipal water (for sinks, bathrooms, etc.), which is segregated and treated by publicly owned treatment works (POTW).

## Waste

The majority of our mills own and operate private landfills (except Filer City, Michigan). These landfills are primarily used to dispose of two high-volume waste byproducts — ash from burning woody biofuels (see Energy) and residuals from our process wastewater treatment plants (WWTP). PCA mills and converting operations avoid sending waste to landfills whenever possible. For example, portions of process residuals are beneficially reused rather than landfilled.

At some of our mills, WWTP residuals and wood-fired boiler ash are beneficially used by local farmers as soil amendments or liming agents to achieve better overall moisture retention, to increase the organic matter content of topsoil and to elevate soil pH, which improves plant nutrient uptake. Additionally, combustion residuals are used on-site at the mills for building roads and banks (which are used for wastewater treatment ponds) and at the landfill as cover material. In some instances, where permitted, we dispose of mill construction waste in these landfills.

Our packaging plants recover the vast majority of their corrugated scrap and sell it back to mills as double-lined kraft (DLK), which is considered pre-consumer recycled material.

### Waste by Type and Disposal Method (thousand metric tons)

	2016	2017	2018	2019	2020
<b>Total</b>	<b>660.7</b>	<b>713.8</b>	<b>809.1</b>	<b>808.8</b>	<b>834.1</b>
Recycled or Beneficially Reused	74%	71%	68%	74%	<b>70%</b>
Landfill	26%	29%	32%	26%	<b>30%</b>

*Notes: Our 2019 Responsibility Report overreported hazardous waste due to a unit of measure error. PCA operations reported less than 50 metric tons per year of hazardous waste (disposed of by third party) between 2017 and 2020. The amount of waste in this category is insufficient to be included in the breakdown of all waste. • Solid waste to landfill is reported for mills only in 2016 and 2017. Packaging plants added 12–15 thousand metric tons per year.*



### Corrugated Recycling

In 2020, PCA recycled approximately **302,000** metric tons of corrugated scrap. That's enough to fill over 40 miles of 50-foot boxcars.

## Procurement Practices

PCA seeks mutually beneficial relationships with suppliers who share our commitment to continuous improvement. We evaluate both potential and current suppliers on dependability and performance level, and we require all vendors to provide quality goods and services at a fair and competitive price. We track all cost savings and cost avoidances that impact our bottom line for all commodities we purchase, and we communicate our progress internally. Purchase volumes, new agreement potential and markets vary, but we always strive to improve from the previous year.

PCA ensures all purchased goods and services meet our needs and, consequently, the needs of our customers. We expect our suppliers to behave ethically in all aspects of their business in compliance with all applicable laws and regulations.

### Supplier Relationships

Importantly, we purchase on value. A substantial proportion of that value stems from long-term business relationships and the mutual trust we have established. Our average supplier relationship exceeds 10 years, but we've done business with many of our suppliers for more than 20 years.

### Expectations of Direct Suppliers

All suppliers are required either by contract or via purchase order to follow the guidelines under "Doing Business with PCA"<sup>49</sup> on our external website. PCA typically uses internal customer surveys to assess and confirm the quality of goods and services provided to our operations.

Agreements with suppliers provide key commercial requirements and also incorporate our social responsibility and sustainability expectations.<sup>50</sup> For example, we include provisions on child labor, forced labor, discrimination, environment and worker safety. We continue to work toward having these responsibility and sustainability expectations present in all agreements with suppliers and business partners.

We expect ethical treatment of all who work for PCA's direct suppliers. This aligns with our firm commitment to the fair and equitable treatment of all of our employees within a safe, healthy and harassment-free work environment.

### Supplier Audits

By inclusion in our agreements, we may also conduct compliance audits. We apply a risk-based approach to determine which suppliers are subject to an audit by our internal procurement or other audit resources.

### Regarding Supply Chain

Responsibility in our incoming material supply chain is typically part of our supplier agreements. Our purchasing department sets up agreements for our various plants, and daily supply chain monitoring is done locally based on local demand and delivery needs. If there are any abnormalities, Corporate Purchasing intervenes to make sure goods are delivered on time and to set up alternative modes of transportation or sources if necessary.

<sup>49</sup> <https://www.packagingcorp.com/doing-business-with-pca>

<sup>50</sup> <https://www.packagingcorp.com/supplier-expectations>

## Modern Slavery and Human Trafficking

PCA recognizes and is subject to the California Transparency in Supply Chains Act of 2010,<sup>51</sup> which requires manufacturers and certain others that do business in California to publicly disclose their efforts to eradicate slavery and human trafficking from their supply chains. Most of our raw materials are sourced in the United States, and almost all of our manufacturing activities are conducted in the U.S. as well.

As part of our due diligence, we reviewed the Global Slavery Index 2018,<sup>52</sup> which provides data related to modern slavery in over 160 countries. The U.S. is classified as taking strong action and is one of only seven G20 countries to take action on modern slavery. The report shows the U.S. having among the lowest prevalence of forced labor, ranking 158 out of 167 countries. Given that the substantial majority of our goods are purchased in the U.S. and because of the types of materials we procure, we have determined modern slavery to be low risk. We continue to monitor our supply chains for potential risk.

## Spending With Diverse Suppliers

For a number of years we have been tracking our spend with diverse suppliers such as minority-owned, women-owned and small businesses. We encourage qualified and diverse suppliers to participate in the bidding process and, to make this easier, we added a questionnaire to our website in June 2019.<sup>53</sup> We verify that our suppliers have a valid certificate from a credible certification agency. PCA's spend with diverse suppliers was \$13.3 million in 2018, \$15.6 million in 2019 and \$11.4 million in 2020.

## Spending With Local Suppliers

PCA provides containerboard and paper and packaging solutions throughout the country. We operate a vertically integrated nationwide network of mills, converting facilities, and related sales and support functions. PCA defines all mills and all domestic plants as *significant locations of operation*. Given the geographic range of PCA operations, we consider the contiguous 48 states to be *local*. PCA's proportion of spend with local suppliers was approximately 95% in 2020.

## Expectations of Employees

In carrying out duties and responsibilities, PCA expects its employees and agents to promote fair dealing with customers, suppliers, competitors and other employees. No employee is allowed to take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair practice. All PCA employees involved in the purchasing decision must maintain professional integrity in their dealings with qualified PCA vendors.

<sup>51</sup> <https://www.packagingcorp.com/california-transparency-in-supply-chains-act>

<sup>52</sup> The Minderoo Foundation Pty Ltd., *Global Slavery Index 2018*.

<sup>53</sup> <https://www.packagingcorp.com/supplier-diversity-statement>

**PCA is committed to building customer relationships based on performance, value and trust.** Trust is a core value and key objective at PCA, and we believe collaborative relationships, bound by the trust we have earned, are the best way to deliver innovative packaging solutions and an outstanding service experience.

This section of our report covers material topics that are important to broader stakeholders, including communities, consumers of our customers' products, governments, our natural environment and people who depend on our adherence to environmental regulations so they have clean water to drink and clean air to breathe. In all cases, it is incumbent on us to *do what we say we're going to do* in adherence to regulatory and voluntary frameworks that provide significant benefits to PCA stakeholders.

# trust

**Environmental Excellence**

**Community Outreach**

**Economic Performance**

**Consumer Health and Safety**

# Environmental Excellence

PCA has a demonstrated track record of environmental compliance excellence and a strong commitment to environmental stewardship. The company has implemented a comprehensive environmental management system to ensure full compliance with all applicable laws and regulations at the federal, state and local level. PCA's corporate environmental experts work closely with regional EH&S managers and facility environmental staff to implement the company's environmental management system and compliance programs. These commitments and investments in environmental excellence provide assurance of our responsible operation and compliance to investors, employees and the public.

Every PCA employee is responsible for environmental compliance, and every manufacturing facility, including paper mills and packaging plants, has personnel responsible for holding employees accountable for ensuring environmental compliance and conformance with PCA's environmental policy. PCA's corporate environmental personnel provide resources for facility environmental personnel including best management practice guidance documents, environmental compliance training modules, permitting assistance, compliance management, environmental operational support and audit services.

## Environmental Management System

The scope of the company's environmental management system includes programs supporting air, wastewater, storm water, spill response, hazardous waste, universal waste, oil management, and key dates management and tracking. Environmental communication and training methods take a number of different forms within PCA. In addition to the online environmental training modules offered to all facilities, frequent calls are held with all paper mill staff to communicate and discuss compliance, performance metrics, and emerging regulatory and technical developments within the company and industry. An annual corporate environmental meeting is held with the mills to provide additional educational opportunities.

In order to ensure that all operations adhere to applicable laws and regulations and also ensure that all permitting, testing, reporting and recordkeeping is completed on schedule, corporate environmental personnel regularly interact with our facilities and lead a robust internal audit program. All facilities are audited on a continuous cycle, once every 3–5 years based on the complexity and needs of the operation. PCA uses EH&S software for all facilities to manage and track environmental compliance, permits, key dates and performance. Internal environmental audit findings are tracked, and non-conformances that are identified during the audits are corrected in a timely manner. Environmental incidents, including any regulatory citations, are promptly addressed and corrected. All incidents are communicated to senior management and tracked in the company's incident reporting system. PCA's Board of Directors annually reviews the company's environmental performance.

## Beyond Compliance

As part of our goal to pursue environmental excellence beyond compliance, PCA provides significant funding and support of environmental research through the National Council for Air and Stream Improvement (NCASI) and the NCASI Foundation. These contributions are used to improve the accuracy of emissions estimates and environmental data quality in the forest products, paper and packaging industry sectors.

### Environmental Performance Metrics — Mills

	2016	2017	2018	2019	2020
Notice of Violation (NOV)	0	0	0	1	3
Permit Exceedance	2	2	0	0	3
Reportable Releases	3	2	0	1	3



## Community Outreach

We seek to be a good neighbor in the more than 90 communities where we operate, as well as in the larger global community. We see this objective as the right thing to do, and it fits with our business philosophy of fostering a caring culture within all PCA operations. Working collaboratively and driving shared value benefits everyone. We regularly promote our community outreach activities through our social media accounts on LinkedIn and Twitter.

We are currently reporting cash donations and are working to report volunteer hours and in-kind donations in the future.

### Charitable Giving

Cash donations (dollars)

	2017	2018	2019	2020
<b>Total</b>	<b>\$1,319,000</b>	<b>\$2,764,000</b>	<b>\$3,726,000</b>	<b>\$985,000</b>
Education (Schools and Scholarships)	36%	78%	80%	29%
Charitable Organizations	64%	22%	20%	71%

### PROJECT UP™ by Boise Paper

Funded through sales of select office papers and in partnership with the Arbor Day Foundation, Project UP works to transform distressed urban areas, like school playgrounds and vacant lots, into vibrant green spaces. Since 2011, Boise Paper has sponsored 15 planting events across the country, including neighborhoods in Indianapolis, Baltimore, Miami, Toronto, Atlanta, Los Angeles, Chicago, Phoenix and Jacksonville. In cooperation with 60 local partners, more than 1,500 Project UP volunteers have planted thousands of trees and hundreds of other woody plants and perennial flowers. Due to unprecedented obstacles, our 2020 event was an online giveaway of nearly 3,500 trees to over 300 virtual participants.

### Hurricane Laura Response

On August 29, 2020, our DeRidder Mill was struck by Hurricane Laura, the strongest hurricane to make landfall in Louisiana in 150 years. This Category 4 hurricane, whose eye was 25 miles wide and passed directly over our mill, sustained winds of 105 MPH, with gusts reaching 150 MPH. The high winds inflicted significant damage on the community. PCA’s DeRidder mill and sister mills across the country responded to this crisis and helped ease the hardships faced by members of the community.



#### Impact on the Community

- Total power outages for 60+ miles for 12 days on average
- Parish and city water system non-functional
- No grocery stores or gas stations in service
- No cell service
- Numerous impassable roads for over two weeks
- 85% of homes received roof damage from hurricane-force winds (estimated)



### Community Relief

PCA took swift action to help get local systems functioning and to provide general supplies to the public, including sending PCA employees to help restore the community:

<i>Generators</i>	<i>Equipment</i>	<i>Supplies</i>
<ul style="list-style-type: none"> <li>• City of DeRidder water/ sewer system</li> <li>• Parish water system</li> <li>• Three local fuel stations</li> </ul>	<ul style="list-style-type: none"> <li>• Four forklifts &amp; eight pallet jacks for Area Relief Supply Centers</li> <li>• Lift pumps for City of DeRidder</li> <li>• Mobile equipment for the National Guard</li> </ul>	<ul style="list-style-type: none"> <li>• Food items</li> <li>• Paper goods</li> <li>• Gallons of water</li> <li>• Cleaning supplies</li> </ul>
<i>Manpower</i>		
<ul style="list-style-type: none"> <li>• Set up generators</li> <li>• Remove trees from roadways, driveways and homes</li> <li>• Repair underground water leaks for the city</li> </ul>		

Due to the mill’s unparalleled response to support the community during a time when so many were already struggling due to the COVID-19 pandemic, the DeRidder City Hall posted this via Facebook:



“ There are so many people helping our community at this time, and we are keeping a long list so that we can properly thank everyone.

But we want to give a special thank-you today to PCA of DeRidder.

PCA is providing generators for some key community operations, heavy equipment and other resources to our city, helping to get our people back online.

PCA, we appreciate you! ”



### Employee Relief

In addition to the community receiving support from PCA, we also supported mill employees who were impacted by the hurricane with the following provisions:

- Generators, box fans, A/C units, fuel
- Semi-trailer loads of household supplies (sent from PCA sister mills)
  - Food, cleaning supplies, toiletries, tarps, extension cords, gas cans, water, etc.
- Tarp crews sent to cover damaged roofs
- Chainsaw crews sent to remove trees from entryways
- Living accommodations (travel trailers) for displaced employees and their families
- Payroll continued as normal

In total, PCA provided over \$1.5 million in employee and community assistance in response to Hurricane Laura.

## Economic Performance

PCA has a history of strong financial performance and encourages all stakeholders to read our annual reports.<sup>54</sup> PCA strives to generate industry-leading returns and maintain a balanced and disciplined capital allocation strategy for the benefit of its shareholders. We believe that strong financial controls and execution are essential and include the following key policies:

### Financial Controls and Records Policy

PCA's principal executive officer and principal financial officer must certify quarterly in PCA's periodic financial reports as to PCA's financial statements, internal controls and disclosure controls and procedures, including as to the fair presentation of the financial information included in those reports. PCA maintains a system of internal controls over financial reporting, which includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of its assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures are being made only with proper authorizations; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements. PCA's internal policies are also designed to ensure the timely reporting of material information.

Executive officers of PCA and the primary individuals at PCA directly responsible for financial reporting must comply with the Code of Ethics for Executive Officers and Principal Accounting Personnel and annually certify compliance.<sup>55</sup>

### Defined Benefit Plan Obligations and Other Retirement Plans

PCA operates several retirement plans for the benefit of its salaried and hourly employees. These include defined benefit plans and defined contribution plans. PCA has defined pension benefit plans for both salaried and hourly employees. The plans covering salaried employees are closed to new entrants with only certain current active grandfathered participants still accruing benefits. The plans covering certain hourly employees are closed to new participants.

### Obligations and Funded Status of Defined Benefit Pension and Other Postretirement Benefits Plans

The funded status of PCA's plans changes from year to year based on the plan asset investment return, contributions, benefit payments, discount rate used to measure the liability and expected participant longevity. For additional information regarding the obligations and funded status of our plans, please see the Employee Benefit Plans and Other Postretirement Benefits footnote included in our annual reports.

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<sup>54</sup> [PCA Annual Reports](#)

<sup>55</sup> Our Code of Ethics can be accessed at [Executive Ethics](#).

## Defined Contribution Plans

Some of our employees participate in defined contribution savings plans, which are available to most of our salaried and hourly employees. The defined contribution plans permit participants to make contributions by salary reduction pursuant to Section 401(k) of the code. PCA makes employer matching contributions and additional contributions to the plans of employees who are not eligible to participate in the defined benefit plans. PCA made contributions of \$80.2 million, \$75.7 million and \$70.1 million in 2020, 2019 and 2018, respectively. For additional information regarding our defined contribution plans, please see the Employee Benefit Plans and Other Postretirement Benefits footnote included in our annual reports and our SEC Form 11-Ks.<sup>56</sup>

## Economic Value

(dollars in millions)

	2018	2019	2020
<b>Direct Economic Value Generated</b>			
Net Sales	\$7,014.6	\$6,964.3	\$6,658.2
<b>Economic Value Distributed</b>			
Cost of Sales, including Wages	(5,369.3)	(5,320.3)	(5,288.8)
Selling, Administrative and Other Expenses <sup>1</sup>	(577.6)	(590.3)	(645.5)
Payments to Providers of Capital – Interest	(97.2)	(136.7)	(91.2)
Payments to Providers of Capital – Dividends <sup>2</sup>	(268.1)	(298.7)	(299.6)
Payments to Governments – Income Taxes <sup>3</sup>			
U.S. Federal	(100.6)	(134.5)	(93.0)
U.S. State	(40.0)	(38.1)	(22.5)
Foreign Canadian <sup>4</sup>	(0.1)	(0.1)	0.0
Foreign Hong Kong <sup>4</sup>	(0.1)	-	(0.1)
<b>Economic Value Retained</b>	<b>\$561.6</b>	<b>\$445.6</b>	<b>\$217.5</b>

<sup>1</sup> Amount for 2020 includes a non-cash impairment charge of \$55.2 million related to the Paper reporting unit.

<sup>2</sup> Reflects actual dividends paid during the year

<sup>3</sup> Reported on a cash basis to exclude the effect of deferred taxes.

<sup>4</sup> Substantially all of PCA's operations and employees are located in the United States of America. PCA does have financially immaterial operations in Canada and Hong Kong with employees of less than 0.3% of our total employees located in these two countries. The 2017 Tax Cuts and Jobs Act included base erosion prevention measures on U.S. earnings with the enactment of the base erosion and anti-abuse tax (BEAT) in IRC Section 59A effective for tax years beginning after December 31, 2017. The BEAT eliminates the deduction of certain base erosion payments made to related foreign corporations and imposes a minimum tax if greater than regular tax. A de minimis exception is provided for companies whose foreign-related party payments are very low, relative to overall deductions, and PCA meets this exception and did not owe BEAT in 2020, 2019 or 2018.

<sup>56</sup> [Retirement Savings Plan for Salaried Employees; Thrift Plan for Hourly Employees](#)

## Consumer Health and Safety

PCA believes that serving our customers, and the consumers who purchase from them, comes with significant responsibility. We do everything we reasonably can to support the health and safety of the ultimate consumer of food, beverage, pharmaceutical and personal care products carried in PCA packaging.

For more than a decade PCA has been a leader in working to ensure the safety of corrugated packaging food applications. In 2010 we undertook an initiative to universally implement Good Manufacturing Practices (GMPs). Concurrently, we chose to inspect our manufacturing locations and audit our food safety management systems to the appropriate AIB International standards. By December 2011, all PCA full-line plants had fully implemented GMPs and successfully audited to AIB standards. Also in 2011, we began exploring the Global Food Safety Initiative (GFSI) and undertook preparations to pilot emerging GFSI-benchmarked standards for practices for implementation across our system of manufacturing plants. In 2013 we launched an initiative to fulfill our commitment to certify all full-line packaging plants by the end of 2016.

### Global Food Safety Initiative

GFSI provides the platform to build food safety management systems that will not only be effective, but also be externally assured, credible and universally accepted. PCA has developed, implemented and audited our food safety management systems to the FSSC 22000 standard. FSSC 22000 combines a rigorous and comprehensive set of GMPs with the internationally accepted ISO 22000 Food Safety Management standard.

PCA remains the only large North American, vertically integrated provider to accomplish GFSI conformance across all full-line corrugating operations. As the PCA system continues to grow organically and by acquisition, all full-line plants accomplish GFSI conformance, as well as sheet plants whose customer base benefits from certification.

### COVID-19 Response

All certified locations maintained GFSI conformance throughout 2020. Our GMPs and food safety management systems prepared us well to implement CDC recommendations to help keep our employees safe. During 2020, we leveraged partial on-site audits to ensure continued conformance while minimizing the time auditors needed to spend in our facilities, thereby reducing the likelihood of transmission.

### Notable Achievements

2011	2012	2016
PCA led the corrugated industry in committing to GFSI accomplishment, well prior to standards being finalized for packaging.	Our Colby, Wisconsin, plant became the first North American corrugating operation to attain GFSI certification. <sup>57</sup>	PCA became the first large North American corrugated provider to achieve GFSI conformance nationwide across our entire system of full-line packaging operations.

<sup>57</sup> Our Colby, Wisconsin, plant moved to Marshfield, Wisconsin, in 2019.

## Assessment of the Health and Safety Impacts of Product and Service Categories

We view our role in supporting the health and safety of the consumer purchasing the products we package to be of the utmost importance. This begins with ensuring that the containerboard we produce and incorporate into our packaging is compliant with statutory and regulatory law and is fit for intended use. PCA invests in a robust product stewardship function to accomplish these objectives. This ensures the cleanliness and safety of the materials we combine and convert into packaging.

## Food Safety Management Systems

A crucial component of our strategy is our food safety management systems, which are established and maintained at each certified operation. The foundation of these systems is based on GMPs and hazard analysis critical control points (HACCP). This foundation drives us to accomplish an in-depth review of every process we employ that may influence the safety of our products. End-to-end, all-encompassing and exhaustive efforts go into identifying any potential hazards and subsequently into quantifying any risks present in our processes. The ultimate objective is to prevent potential illness by effectively mitigating risk to consumer health and well-being. The end result is assurance that we have built health and safety expectations into our products. By doing so, both our customers and the consumer know that every effort has been made to support food safety. Our food safety management systems are audited annually by NSF International for external assurance.



### ***GFSI Vision***

Safe food for consumers – everywhere.

### ***GFSI Mission***

Provide continuous improvement in food safety management systems to ensure confidence in the delivery of safe food to consumers worldwide.

### ***GFSI Objectives***

- Reduce food safety risks by delivering equivalence and convergence between effective food safety management systems.
- Manage cost in the global food system by eliminating redundancy and improving operational efficiency.
- Develop competencies and capacity building in food safety to create consistent and effective global food systems. Provide a unique international stakeholder platform for collaboration, knowledge exchange and networking.

**Global Reporting Initiative (GRI) Index**

**Membership of Associations**

**Emission Factors and Global Warming Potential (GWP)**

**Employer Information Report EEO-1, Employment Data**

**Master Data Table**

**Glossary**

**List of Referenced Sources**

appendix

# Global Reporting Initiative (GRI) Index

<i>Organizational Profile</i>		
<b>102-1</b>	Name of the Organization	Packaging Corporation of America
<b>102-2</b>	Activities, Brands, Products and Services	2020 Annual Report, pages 2–4
<b>102-3</b>	Location of Headquarters	Lake Forest, Illinois, USA
<b>102-4</b>	Location of Operations	2020 Annual Report, page 2
<b>102-5</b>	Ownership and Legal Form	Packaging Corporation of America is publicly held, incorporated in Delaware, USA. Our common stock is listed on the New York Stock Exchange under the symbol "PKG."
<b>102-6</b>	Markets Served	2020 Annual Report, pages 4, 6
<b>102-7</b>	Scale	2020 Annual Report, pages 1–6
<b>102-8</b>	Employees and Other Workers	20
<b>102-9</b>	Supply Chain	2020 Annual Report, pages 3–6
<b>102-10</b>	Significant Changes	No significant changes to the organization during 2020.
<b>102-11</b>	Precautionary Approach or Principle	PCA follows a "precautionary approach" when developing, and prior to offering, new products. We seek to identify potential hazards and risk early in development, such that they can either be eliminated or assuredly managed to a level where they are acceptably mitigated for purposes of our customers, employees, communities and other stakeholders. Sensitivity to the impact that our products and their sourcing/ production/provision may have on health, safety and the environment is a key underpinning of our sustainability strategy and objectives.
<b>102-12</b>	External Initiatives	CDP EcoVadis Global Food Safety Initiative (GFSI) Paper & Packaging: How Life Unfolds Project UP! In partnership with Arbor Day Sedex
<b>102-13</b>	Membership of Associations	59
<i>Strategy</i>		
<b>102-14</b>	Statement from Senior Decision-Maker	4
<b>102-15</b>	Description of Key Impacts, Risks and Opportunities	11, 27–28
<i>Ethics and Integrity</i>		
<b>102-16</b>	Values, Principles, Standards and Norms of Behavior	Corporate Governance, Code of Ethics and Business Conduct, Code of Ethics for Directors, Code of Ethics for Executive Officers and Principal Accounting Personnel
<b>102-17</b>	Mechanisms for Advice and Concerns About Ethics	PCA has established a toll-free help line: (877) 643-8722. Concerns may also be written and mailed to: Compliance Officer Packaging Corporation of America c/o Corporate Counsel 1 North Field Court Lake Forest, Illinois 60045  Code of Ethics and Business Conduct, pages 6–8
<i>Governance</i>		
<b>102-18</b>	Governance Structure and Committees Responsible	Corporate Governance Guidelines, Audit Committee Charter, Compensation Committee Charter, Section 162(m) Subcommittee Charter, Nominating and Governance Committee Charter, Board of Directors, Senior Management Team
<i>Stakeholder Engagement</i>		
<b>102-40</b>	List of Stakeholder Groups	Employees, customers, shareholders and other capital providers, governments, neighbors (community members), landowners and fiber suppliers, suppliers of other goods and services.
<b>102-41</b>	Collective Bargaining Agreements	2020 Annual Report, page 7



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<b>102-42</b>	Identifying and Selecting Stakeholders	7
<b>102-43</b>	Approach to Stakeholder Engagement	7-8
<b>102-44</b>	Key Topics and Concerns Raised	7-8

## Reporting Practice

<b>102-45</b>	Entities Included in the Consolidated Financial Statements	2020 Annual Report, page 48
<b>102-46</b>	Defining Report Content and Topic Boundaries	Boundaries for topic disclosures are determined based on data relevance, data availability and materiality. Significance of topics was determined based on surveys and research of stakeholder groups.
<b>102-47</b>	List of Material Topics	10
<b>102-48</b>	Restatements of Information	Any restatements of information are noted with an adjacent footnote. Restatements in this report are for renewable fuel and subsequent biogenic emissions in 2019, and all previously reported hazardous waste.
<b>102-49</b>	Changes in Reporting	No changes in reporting period, material topics or topic boundaries.
<b>102-50</b>	Reporting Period	PCA's Fiscal (Calendar) Year 2020.
<b>102-51</b>	Date of Most Recent Report	June 30, 2020
<b>102-52</b>	Reporting Cycle	Annual
<b>102-53</b>	Contact Point for Questions Regarding the Report	responsibility@packagingcorp.com
<b>102-54</b>	Claims of Reporting in Accordance with GRI Standards	This report has been prepared in accordance with the GRI Standards: Core Option.
<b>102-55</b>	GRI Content Index	56-59
<b>102-56</b>	External Assurance	No external assurance for PCA's 2020 Responsibility Report. All data and information has undergone internal review.

## Economic Disclosures

<b>201</b>	Economic Performance Management Approach	51
<b>201-1</b>	Direct Economic Value Generated and Distributed	52
<b>201-2</b>	Financial Implications Due to Climate Change	2020 Annual Report, page 32
<b>201-3</b>	Defined Benefit Plan Obligations and Other Retirement Plans	51-52
<b>201-4</b>	Financial Assistance Received From Government	The company did not receive financial assistance from governments in 2020, 2019, 2018 or 2017.
<b>204</b>	Procurement Practices Management Approach	45
<b>204-1</b>	Proportion of Spending on Local Suppliers	46

## Environmental Disclosures

<b>301</b>	Materials Management Approach	35
<b>301-1</b>	Materials Used by Weight or Volume	35
<b>301-2</b>	Recycled Input Materials Used	35
<b>301-3</b>	Reclaimed Products	38
<b>302</b>	Energy Management Approach	30
<b>302-1</b>	Energy Consumption Within the Organization	31
<b>302-2</b>	Energy Consumption Outside of the Organization	31
<b>302-3</b>	Energy Intensity	12
<b>303-1</b>	Interactions With Water as a Shared Resource	42
<b>303-2</b>	Management of Water Discharge-Related Impacts	43
<b>303-3</b>	Water Withdrawal	42
<b>303-4</b>	Water Discharge	43
<b>304</b>	Biodiversity Management Approach	40
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<b>304-2</b>	Significant Impacts on Biodiversity	40–41
<b>304-3</b>	Habitats Protected or Restored	40
<b>304-4</b>	IUCN Red List Species	40
<b>305</b>	Emissions Management Approach	32
<b>305-1</b>	Direct (scope 1) GHG Emissions	32
<b>305-2</b>	Energy Indirect (Scope 2) GHG Emissions	32
<b>305-3</b>	Other Indirect (Scope 3) GHG Emissions	32
<b>305-4</b>	GHG Emissions Intensity	34
<b>305-5</b>	Reduction of GHG Emissions	32
<b>305-6</b>	Emission of Ozone-Depleting Substances (ODS)	All emissions from unrecovered refrigerant are HFCs reported on page 32. PCA does not use or make CFCs.
<b>305-7</b>	Nitrogen Oxides (NO <sub>x</sub> ), Sulfur Oxides (SO <sub>x</sub> ) and Other Significant Air Emissions	34
<b>306</b>	Waste Management Approach	44
<b>306-2</b>	Waste by Type and Disposal Method	44
<b>306-4</b>	Transport of Hazardous Waste	44
<b>307</b>	Environmental Compliance Management Approach	48
<b>307-1</b>	Non-Compliance With Environmental Laws and Regulations	PCA did not have any material violation of environmental laws in 2020, 2019, 2018 or 2017.
<b>Social Disclosures</b>		
<b>401</b>	Employment Management Approach	20
<b>401-1</b>	Employee Hires and Turnover	20
<b>401-2</b>	Benefits Provided	20–21
<b>401-3</b>	Parental Leave	21
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<b>403-6</b>	Promotion of Worker Health	16
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<b>404</b>	Training and Education Management Approach	17
<b>404-1</b>	Average Hours of Training Per Year Per Employee	17
<b>404-2</b>	Programs for Upgrading Employee Skills and Transition Assistance Programs	17–19
<b>404-3</b>	Percentage of Employees Receiving Regular Performance Reviews	PCA utilizes various formal and informal performance management processes, trainings and development programs to build competence among employees. Employees are evaluated on job performance, including performance against the expected standards of conduct.

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<b>405</b>	Diversity and Equal Opportunity Management Approach	25
<b>405-1</b>	Diversity of Governance Bodies and Employees	25
<b>413</b>	Local Communities Management Approach	49
<b>413-1</b>	Operations With Local Community Engagement	49
<b>413-2</b>	Operations With Significant Actual and Potential Negative Impacts on Local Communities	PCA is not aware of any current operations that pose actual or potential material negative impacts on the communities where we operate.
<b>416</b>	Consumer Health and Safety Management Approach	53
<b>416-1</b>	Assessment of the Health and Safety Impacts	54
<b>416-2</b>	Incidence of Non-Compliance Concerning Health and Safety	PCA did not have any incidents of non-compliance with product safety regulations or material instances non-compliant with voluntary product safety codes in 2020.

## Membership of Associations

American Forest and Paper Association (AF&PA)	National Council for Air and Stream Improvement (NCASI)
American Forest Resource Council (AFRC)	National Fire Protection Association (NFPA)
American Society for Quality (ASQ)	National Paper Trade Association (NPTA)
ASTM International	North American Forest Partnership (NAFP)
Corrugated Packaging Alliance (CPA)	Programme for the Endorsement of Forest Certification (PEFC)
Envelope Manufacturers Association (EMA)	Pulp and Paper Safety Association (PPSA)
Federal Water Quality Coalition (FWQC)	Recycled Paperboard Technical Association (RPTA)
Fibre Box Association (FBA)	Society for Human Resource Management (SHRM)
Forest Stewardship Council® (FSC®)	Society of American Foresters (SAF)
Institute of Packaging Professionals (IoPP)	Supplier Ethical Data Exchange (SEDEX)
International Corrugated Case Association (ICCA)	Sustainable Forestry Initiative® (SFI)
International Corrugated Packaging Foundation (ICPF)	Sustainable Packaging Coalition (SPC)
International Organization for Standardization (ISO)	Technical Association of Pulp & Paper Industry (TAPPI)
International Safe Transit Association (ISTA)	The Nature Conservancy

## Emission Factors and Global Warming Potential (GWP)

<i>Scopes 1 &amp; 2</i>	
Scope 1	U.S. EPA MRR: Final Rule (40 CFR 98) — Industrial Sector 2013
Scope 2 (2016–17)	U.S. EPA eGRID: eGRID 2017 v2 (w/ 2014 Data)
Scope 2 (2018)	U.S. EPA eGRID: eGRID 2018 (w/ 2016 Data)
Scope 2 (2019)	U.S. EPA eGRID: eGRID 2020 (w/ 2018 Data)
Scope 2 (2020)	U.S. EPA eGRID: eGRID 2021 (w/ 2019 Data)
<i>Scope 3</i>	
Category 1 — Purchased Goods and Services	<ul style="list-style-type: none"> <li>– Carnegie Mellon University Green Design Institute (2020) Economic Input-Output Life Cycle Assessment (EIO-LCA) U.S. 2002 (428 sectors) Purchaser Model</li> <li>– Carnegie Mellon University Green Design Institute (2020) Economic Input-Output Life Cycle Assessment (EIO-LCA) U.S. 2007 (388 sectors) Producer Model</li> <li>– Life cycle assessment study of starch products for the European starch industry association (AAF): Sector study, Figure 3</li> <li>– Life cycle assessment of forest harvesting and transportation operations in Tennessee</li> <li>– Environmental impacts of roundwood supply chain options in Michigan: Life cycle assessment of harvest and transport stages</li> </ul>
Category 2 — Capital Goods	– Carnegie Mellon University Green Design Institute. (2020) Economic Input-Output Life Cycle Assessment (EIO-LCA) U.S. 2002 (428 sectors) Purchaser model
Category 3 — Fuel and Energy-Related Activities	– U.S. EPA eGRID: Grid Gross Loss (GGL) 2018
Category 4 — Upstream Transportation and Distribution	<ul style="list-style-type: none"> <li>– Life cycle assessment of forest harvesting and transportation operations in Tennessee</li> <li>– Environmental impacts of roundwood supply chain options in Michigan: Life cycle assessment of harvest and transport stages</li> </ul>
Category 5 — Waste Generated in Operations	– U.S. EPA Solid Waste Management and Greenhouse Gases. A Life Cycle Assessment of Emissions and Sinks, 3rd edition.
Category 6 — Business Travel	<ul style="list-style-type: none"> <li>– U.S. EPA MRR — Final Rule (40 CFR 98) — Industrial Sector 2013; EPA (2014) Inventory of U.S. Greenhouse Gas Emissions and Sinks</li> <li>– Air Travel factors from 2017 Guidelines to Defra / DECC’s GHG Conversion Factors for Company Reporting. Version 1.0 August 2017.</li> </ul>
Category 7 — Employee Commuting	– EPA Hub (Mar 2018), CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O emissions data for highway vehicles are from Table 2-13 of the Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015. Vehicle-miles and passenger-miles data for highway vehicles are from Table VM-1 of the Federal Highway Administration Highway Statistics 2015.
Category 9 — Downstream Transportation and Distribution	<ul style="list-style-type: none"> <li>– EDF Green Freight handbook, Rail, Distance</li> <li>– U.S. EPA MRR — Final Rule (40 CFR 98) — Industrial Sector 2013; EPA (2014) Inventory of U.S. Greenhouse Gas Emissions and Sinks</li> </ul>
<i>Global Warming Potential</i>	
CH <sub>4</sub> (2016–2019)	25
N <sub>2</sub> O (2016–2019)	298
CH <sub>4</sub> (2020)	28
N <sub>2</sub> O (2020)	265

# appendix

## Employer Information Report EEO-1, Employment Data

Job Categories	Number of Employees															Total
	Male							Female								
	WHITE	HISP	BLACK	ASIAN	NHOPI	NAT AM	2+ RACE	WHITE	HISP	BLACK	ASIAN	NHOPI	NAT AM	2+ RACE		
Exec / Senior Managers (1.1)	78	0	1	9	0	0	0	12	0	0	1	0	0	0	101	
First / Mid-Level Managers (1.2)	1,443	167	74	24	3	7	3	270	22	9	14	1	0	4	2,041	
Professionals (2)	569	48	22	21	1	4	15	406	52	30	25	3	1	4	1,201	
Technicians (3)	40	4	1	0	0	1	0	12	5	0	0	0	0	0	63	
Sales Workers (4)	375	37	8	3	1	1	0	303	55	6	7	1	6	9	812	
Admin Support (5)	182	36	13	4	0	0	3	150	19	7	3	1	0	1	419	
Craft Workers (6)	1,226	115	48	9	0	9	9	15	1	2	0	0	0	0	1,434	
Operatives (7)	3,617	1,487	958	141	53	35	89	392	152	150	10	10	4	9	7,107	
Laborers & Helpers (8)	913	373	310	43	6	9	30	152	88	55	2	4	2	6	1,993	
Service Workers (9)	14	1	4	0	0	0	0	8	2	3	0	0	0	0	32	
<b>Total (10)</b>	<b>8,457</b>	<b>2,268</b>	<b>1,439</b>	<b>254</b>	<b>64</b>	<b>66</b>	<b>149</b>	<b>1,720</b>	<b>396</b>	<b>262</b>	<b>62</b>	<b>20</b>	<b>13</b>	<b>33</b>	<b>15,203</b>	

PCA's EEO-1 report was filed with the U.S. Equal Employment Opportunity Commission in May, 2021. Data used for the report was from our 12/15/2020 to 12/31/2020 payroll period.  
 HISP = Hispanic · NHOPI = Native Hawaiian and Other Pacific Islanders · NAT AM = Native American · 2+ RACE = Two or More Races

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## Master Data Table

	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
<b>Production and Shipments</b>						
Containerboard Production	thousand tons	<b>4,341</b>	4,249	4,081	3,881	3,736
Corrugated Shipments	billion square feet (BSF)	<b>62.8</b>	59.4	58.9	55.7	51.3
White Paper (UFS) Production	thousand tons	<b>648</b>	947	1,017	1,118	1,127
Market Pulp Production	thousand tons	<b>0</b>	0	0	0	45
<b>Occupational Health and Safety</b>						
Employee Days Away, Restricted or Transferred (DART)	cases x 200,000/total hours worked	<b>1.25</b>	1.04	0.92	0.94	0.73
Employee Lost Time Case Rate (LTCR)	cases x 200,000/total hours worked	<b>0.63</b>	0.48	0.37	0.39	0.36
Employee Total Case Rate (TCR)	cases x 200,000/total hours worked	<b>1.9</b>	1.8	1.7	1.6	1.4
Employee Fatalities		<b>0</b>	0	0	0	0
Temp. Worker Days Away, Restricted or Transferred (DART)	cases x 200,000/total hours worked	<b>0</b>	0.53	0.43	0.57	0.49
Temp. Worker Lost Time Case Rate (LTCR)	cases x 200,000/total hours worked	<b>0</b>	0.36	0.26	0.28	0.49
Temp. Worker Total Case Rate (TCR)	cases x 200,000/total hours worked	<b>0.7</b>	1.1	1.1	1.1	1.3
Temp. Worker Fatalities		<b>0</b>	0	0	0	0
<b>Training and Education</b>						
Average Training Hours per Employee	hours/employee	<b>1.6</b>	-	-	-	-
Female Employee Participation in Degree Pursuit Program		<b>43</b>	38	45	41	-
Male Employee Participation in Degree Pursuit Program		<b>42</b>	38	37	35	-
Female Co-Op Participation in Degree Pursuit Program		<b>0</b>	3	-	-	-
Male Co-Op Participation in Degree Pursuit Program		<b>9</b>	6	-	-	-
Total Participation in Degree Pursuit Program		<b>94</b>	85	82	76	-
Total Contribution for Degree Pursuit Program	U.S. dollars	<b>\$435,000</b>	\$468,200	\$396,500	\$374,400	
<b>Employment</b>						
Grand Total New Hires		<b>2,199</b>	3,010	2,427	1,560	-
Total New Hires of Female Employees		<b>331</b>	519	449	409	-
Total New Hires of Male Employees		<b>1,868</b>	2,419	1,978	1,151	-
New Hires of Female Employees 18–24 Years Old		<b>91</b>	131	117	118	-
New Hires of Male Employees 18–24 Years Old		<b>473</b>	639	460	307	-

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	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
New Hires of Female Employees 25–34 Years Old		<b>93</b>	176	136	104	-
New Hires of Male Employees 25–34 Years Old		<b>632</b>	848	704	369	-
New Hires of Female Employees 35–44 Years Old		<b>69</b>	100	77	83	-
New Hires of Male Employees 35–44 Years Old		<b>379</b>	496	357	213	-
New Hires of Female Employees 45–54 Years Old		<b>53</b>	77	87	84	-
New Hires of Male Employees 45–54 Years Old		<b>255</b>	341	307	177	-
New Hires of Female Employees 55–64 Years Old		<b>25</b>	32	32	19	-
New Hires of Male Employees 55–64 Years Old		<b>116</b>	159	143	80	-
New Hires of Female Employees 65+ Years Old		<b>0</b>	3	0	1	-
New Hires of Male Employees 65+ Years Old		<b>13</b>	8	7	5	-
Grand Total of Employee Turnover		<b>2,623</b>	2,611	2,277	2,108	-
Total Turnover of Female Employees		<b>437</b>	461	397	371	-
Total Turnover of Male Employees		<b>2,186</b>	2,150	1,880	1,737	-
Turnover of Female Employees 18–24 Years Old		<b>69</b>	118	92	67	-
Turnover of Male Employees 18–24 Years Old		<b>337</b>	386	273	282	-
Turnover of Female Employees 25–34 Years Old		<b>110</b>	112	74	80	-
Turnover of Male Employees 25–34 Years Old		<b>542</b>	589	517	409	-
Turnover of Female Employees 35–44 Years Old		<b>84</b>	67	65	68	-
Turnover of Male Employees 35–44 Years Old		<b>409</b>	388	319	328	-
Turnover of Female Employees 45–54 Years Old		<b>76</b>	73	71	69	-
Turnover of Male Employees 45–54 Years Old		<b>306</b>	316	298	294	-
Turnover of Female Employees 55–64 Years Old		<b>72</b>	60	57	56	-
Turnover of Male Employees 55–64 Years Old		<b>405</b>	328	327	29	-
Turnover of Female Employees 65+ Years Old		<b>26</b>	31	38	31	-
Turnover of Male Employees 65+ Years Old		<b>187</b>	143	146	134	-
<b>Employees</b>						
Total Employees		<b>15,200</b>	15,500	15,000	14,600	-
Total Salaried Employees		<b>4,500</b>	4,500	4,500	4,400	-
Total Hourly Employees		<b>10,700</b>	11,000	10,500	10,200	-
Employees Covered by Collective Bargaining Agreements (CBA)		<b>6,634</b>	6,930	6,615	6,630	-
Hourly Employees in CBA as % of Total Hourly Employees		<b>62%</b>	63%	63%	65%	-
Employees in CBA as % of All Employees		<b>44%</b>	44%	45%	46%	-
Percentage of Female Employees		<b>16%</b>	17%	17%	16%	-
Percentage of Male Employees		<b>84%</b>	83%	83%	84%	-
Percentage of Full-Time Employees		<b>99.9%</b>	99.9%	99.9%	99.9%	-
Percentage of Part-Time Employees		<b>0.1%</b>	0.1%	0.1%	0.1%	-
Percentage of Employees in USA		<b>99.7%</b>	99.7%	99.7%	99.7%	-
Percentage of Employees in Canada		<b>0.2%</b>	0.2%	0.2%	0.2%	-
Percentage of Employees in Hong Kong		<b>0.1%</b>	0.1%	0.1%	0.1%	-

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	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
<b>Diversity, Equity and Inclusion</b>						
Number of Female Directors		<b>2</b>	2	1	1	-
Number of Male Directors		<b>9</b>	10	10	10	-
Number of Directors 30–50 Years Old		<b>0</b>	0	1	1	-
Number of Directors Over 50 Years Old		<b>11</b>	12	10	10	-
Number of Male Directors 30–50 Years Old		<b>0</b>	0	1	1	-
Number of Male Directors Over 50 Years Old		<b>9</b>	10	9	9	-
Number of Female Directors Over 50 Years Old		<b>2</b>	2	1	1	-
Total Number of Directors		<b>11</b>	12	11	11	-
Number of Female Executive Officers		<b>1</b>	1	0	0	-
Number of Male Executive Officers		<b>10</b>	9	6	6	-
Number of Executive Officers 30–50 Years Old		<b>2</b>	2	1	1	-
Number of Executive Officers Over 50 Years Old		<b>9</b>	8	5	5	-
Number of Male Executive Officers 30–50 Years Old		<b>2</b>	2	1	1	-
Number of Male Executive Officers Over 50 Years Old		<b>8</b>	7	5	5	-
Number of Female Executive Officers Over 50 Years Old		<b>1</b>	1	0	0	-
Total Number of Executive Officers		<b>11</b>	10	6	6	-
Number of Female Officers		<b>7</b>	3	4	4	-
Number of Male Officers		<b>23</b>	21	19	16	-
Total Number of Officers		<b>30</b>	24	23	20	-
Number of Female Employees 18–24 Years Old		<b>116</b>	134	131	121	-
Number of Male Employees 18–24 Years Old		<b>833</b>	822	790	782	-
Number of Female Employees 25–34 Years Old		<b>459</b>	466	455	422	-
Number of Male Employees 25–34 Years Old		<b>2,760</b>	2,755	2,648	2,621	-
Number of Female Employees 35–44 Years Old		<b>505</b>	540	526	488	-
Number of Male Employees 35–44 Years Old		<b>2,723</b>	2,712	2,605	2,579	-
Number of Female Employees 45–54 Years Old		<b>718</b>	735	716	665	-
Number of Male Employees 45–54 Years Old		<b>3,156</b>	3,165	3,309	2,858	-
Number of Female Employees 55–64 Years Old		<b>638</b>	639	623	578	-
Number of Male Employees 55–64 Years Old		<b>2,896</b>	3,010	2,889	2,858	-
Number of Female Employees 65+ Years Old		<b>64</b>	68	67	62	-
Number of Male Employees 65+ Years Old		<b>370</b>	475	456	451	-
<b>Energy</b>						
Energy Consumption From Non-Renewable Fuel	million GJ	<b>29.9</b>	32.6	30.6	27.8	30.4
Percentage of Non-Renewable Fuel From Natural Gas		<b>96.8%</b>	97.1%	96.4%	95.3%	95.4%
Percentage of Non-Renewable Fuel From Other Fossil Fuels		<b>3.2%</b>	2.9%	3.6%	4.7%	4.6%
Energy Consumption From Renewable Fuel	million GJ	<b>70.8</b>	72.6	73.3	72.9	73.1
Percentage of Renewable Fuel From Black Liquor Solids		<b>69.8%</b>	71.0%	67.7%	67.5%	68.0%



# appendix

	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Percentage of Renewable Fuel From Bark		<b>26.7%</b>	26.2%	29.0%	30.2%	29.8%
Percentage of Renewable Fuel From Other Biogenic Fuels		<b>3.5%</b>	2.8%	3.3%	2.3%	2.2%
Energy Consumed From Purchased Electricity and Steam	million GJ	<b>9.4</b>	9.8	9.7	9.0	9.4
Energy Consumed From Self-Generated Hydroelectricity	million GJ	<b>0.3</b>	0.3	0.3	0.4	0.3
Total Energy Consumed	million GJ	<b>110.4</b>	113.0	113.9	110.1	113.2
<b>Emissions</b>						
Scope 1 GHG Emissions	million metric tons CO <sub>2</sub> e	<b>1.75</b>	2.03	1.94	1.84	1.94
Percentage of Scope 1 Emissions From Packaging Plants and Other		<b>10.6%</b>	8.8%	10.5%	10.8%	10.0%
Percentage of Scope 1 Emissions From Containerboard Mills		<b>72.4%</b>	66.3%	61.4%	53.9%	52.7%
Percentage of Scope 1 Emissions From White Paper Mills		<b>17.0%</b>	24.9%	27.9%	35.6%	38.6%
Scope 2 GHG Emissions (location-based)	million metric tons CO <sub>2</sub> e	<b>1.08</b>	1.22	1.28	1.34	1.38
Percentage of Scope 2 Emissions From Packaging Plants and Other		<b>15.7%</b>	14.4%	13.4%	12.8%	12.1%
Percentage of Scope 2 Emissions From Containerboard Mills		<b>70.1%</b>	64.8%	66.2%	59.1%	56.0%
Percentage of Scope 2 Emissions From White Paper Mills		<b>14.2%</b>	20.8%	20.1%	28.0%	31.9%
Scope 3 GHG Emissions	million metric tons CO <sub>2</sub> e	<b>1.04</b>	1.16	1.10	-	-
Percentage of Scope 3 Emissions From Upstream		<b>84.3%</b>	86.0%	59.2%	-	-
Percentage of Scope 3 Emissions From Downstream		<b>15.7%</b>	14.0%	37.9%	-	-
Total GHG Emissions (location-based)		<b>3.88</b>	4.41	4.32	3.18	3.32
Total GHG Emissions (market-based)		<b>4.15</b>	-	-	-	-
Biogenic CO <sub>2</sub> Emissions	million metric tons CO <sub>2</sub>	<b>6.33</b>	6.47	6.55	6.52	6.54
Nitrogen Oxides (NO <sub>x</sub> ) Air Emissions	thousand metric tons	<b>6.0</b>	6.6	6.4	6.4	6.7
Sulfur Dioxide (SO <sub>2</sub> ) Air Emissions	thousand metric tons	<b>2.1</b>	1.5	1.4	2.0	1.9
Particulate Matter 10 (PM <sub>10</sub> ) Air Emissions	thousand metric tons	<b>1.0</b>	1.6	-	-	-
<b>Materials – Wood Fiber Sourcing</b>						
First-Use (virgin) Fiber Sourced	thousand green tons	<b>13,933</b>	15,021	14,668	14,439	14,234
Percent by Weight of First-Use Fiber Certified Sourced		<b>33%</b>	30%	30%	32%	29%
Percent by Weight of First-Use Fiber PEFC Certified Sourced		<b>28%</b>	26%	26%	27%	26%
Percent by Weight of First-Use Fiber FSC Certified Sourced		<b>5%</b>	4%	4%	5%	3%

# appendix

	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Recovered Fiber Sourced	thousand tons	<b>994</b>	1,053	1,083	1,013	967
Market Pulp Sourced	thousand tons	<b>18</b>	6	4	5	4
PEFC Certified Product Sold, Corrugated	thousand tons	<b>206.3</b>	174.9	167.3	61.8	17.1
PEFC Certified Product Sold, White Paper	thousand tons	<b>27.1</b>	33.5	48.1	36.7	32.1
FSC Certified Product Sold, White Paper	thousand tons	<b>72.2</b>	116.5	126.6	95.2	61.4
Total Certified Product Sold	thousand tons	<b>305.6</b>	324.9	342.0	193.7	110.6
<b>Water and Effluents</b>						
Total Water Withdrawn	billion liters	<b>270.8</b>	273.9	280.3	288.2	283.5
Surface Water Withdrawn	billion liters	<b>197.1</b>	197.0	197.7	203.9	193.9
Percentage of Surface Water for Process		<b>61.9%</b>	59.4%	60.9%	59.8%	59.0%
Percentage of Surface Water for Cooling		<b>37.9%</b>	40.4%	38.9%	40.0%	40.8%
Percentage of Surface Water for Potable		<b>0.2%</b>	0.2%	0.2%	0.2%	0.2%
Ground Water Withdrawn	billion liters	<b>72.0</b>	74.3	79.3	83.8	87.9
Percentage of Ground Water for Process		<b>87.1%</b>	83.8%	85.5%	82.8%	84.7%
Percentage of Ground Water for Cooling		<b>12.7%</b>	15.9%	14.3%	16.9%	15.1%
Percentage of Ground Water for Potable		<b>0.2%</b>	0.3%	0.2%	0.3%	0.3%
Municipal Water Withdrawn	billion liters	<b>1.7</b>	2.6	2.8	0.5	1.7
Water Consumption	liters/ton of production	<b>1,110</b>	-	-	-	-
Total Water Discharges at Mills	billion liters	<b>270.5</b>	271.9	252.4	270.0	268.8
Percent of Water Discharges at Mills From Cooling		<b>24%</b>	23%	17.8%	27.4%	24.9%
Percent of Water Discharges at Mills From Receiving		<b>76%</b>	77%	82.2%	72.6%	75.1%
Biological Oxygen Demand (BOD)	lbs/ton of production	<b>1.54</b>	1.38	1.88	1.69	1.65
Total Suspended Solids (TSS)	lbs/ton of production	<b>2.37</b>	2.42	3.24	2.81	2.59
<b>Waste</b>						
Process Waste Recycled or Beneficially Reused	thousand metric tons	<b>583.9</b>	600.4	525.7	505.1	488.7
Process Waste to Landfill	thousand metric tons	<b>250.2</b>	198.1	237.4	201.5	172.0
Hazardous Waste (disposed of by third party)	metric tons	<b>43.7</b>	21.9	37.3	21.7	-
Total Process Waste	thousand metric tons	<b>834.1</b>	808.8	809.1	713.8	660.7
<b>Communities</b>						
Cash Donations	dollars, in thousands	<b>\$985</b>	\$3,726	\$2,764	\$1,319	-

# appendix

	<i>Unit of Measure</i>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
<b><i>Economic Performance</i></b>						
Direct Economic Value Generated — Net Sales	millions of dollars	<b>\$6,658.2</b>	\$6,964.3	\$7,014.6	-	-
Costs of Sales, Including Wages	millions of dollars	<b>\$(5,288.8)</b>	\$(5,320.3)	\$(5,369.3)	-	-
Selling and Administrative Expenses	millions of dollars	<b>\$(645.5)</b>	\$(590.3)	\$(577.6)	-	-
Payments to Providers of Capital — Interest	millions of dollars	<b>\$(91.2)</b>	\$(136.7)	\$(97.2)	-	-
Payments to Providers of Capital — Dividends	millions of dollars	<b>\$(299.6)</b>	\$(298.7)	\$(268.1)	-	-
Payments to Government — Income Taxes	millions of dollars	<b>\$(115.6)</b>	\$(172.7)	\$(140.8)	-	-
Total Economic Value Retained	millions of dollars	<b>\$217.5</b>	\$445.6	\$561.6	-	-

# appendix

## Glossary

**ADS Tons** Air-Dried Short Tons. Pulp is generally reported as an air-dried product that is assumed to be 10% water and 90% dry pulp.

**American Tree Farm System (ATFS)** A group that works with private landowners to help them be effective stewards of forests.

**Biogenic Carbon** CO<sub>2</sub> emissions related to the natural carbon cycle, as well as those resulting from the combustion, harvest, digestion, fermentation, decomposition or processing of biologically based material.

**Biogenic Fuel** Fuel generated through the consumption of biomass. Generates biogenic carbon as opposed to the use of fossil fuels, which generates carbon that has long been removed from the natural carbon cycle (thus introducing additional carbon to the present day).

**Biological Oxygen Demand (BOD)** The amount of dissolved oxygen needed by aerobic biological organisms to break down organic material. Used to measure water quality.

**Biomass Energy** Energy derived by combusting fuel that is developed from organic material. In PCA's case, pulping byproducts like black liquor solids and wood waste (bark, knots, etc.). Renewable source of energy.

**Black Liquor** The remaining water, after chemical reclamation processes, from kraft process pulping operations. Contains significant lignin and hemicelluloses. Typically processed to drive off water and to combust the biogenic material remaining to provide heat, steam and electricity to power mill processes.

**California Transparency in Supply Chains Act of 2010** Requires larger manufacturers and certain others that do business in California to publicly disclose their efforts to eradicate slavery and human trafficking from their supply chains.

**Carbon Dioxide Equivalent (CO<sub>2</sub>e)** Measure used to compare emissions when fossil fuels such as coal, oil and gas are burned — in equivalence to the global warming potential of carbon dioxide.

**Caustic Soda** Sodium hydroxide, NaOH, a strong base used in pulping processes.

**Chain of Custody** A certification that connects materials or products back to their original source. In the case of forest products like PCA's, it requires connecting and documenting sequential steps through the supply chain from the original procurement of fiber, whether from recycled or certified forests, through each subsequent stage of processing and distribution.

**Containerboard** Paperboard specifically made for the construction of corrugated packaging (linerboard and corrugating medium). It is also used, to a lesser degree, in the manufacture of several other types of packaging.

**Days Away Restricted or Transferred (DART)** Refers to the number of recordable (human health and safety) incidents per 200,000 hours worked that resulted in workdays where the employee was assigned to a different task, restricted in their duties or transferred due to work-related injuries or illness.

**Direct Emissions (Scope 1)** Greenhouse gas emissions directly controlled by PCA.

**Double-Lined Kraft (DLK)** Corrugated scrap from box-making. Considered pre-consumer recycled material.

**"Dual-Chain" (Dual Chain of Custody)** PCA's sheet plants are certified to SFI® and PEFC and are thus described as dual chain of custody.

**ECF (Elemental Chlorine Free)** A method of bleaching wood fiber from its natural color to white in various brightness levels.

**Fair Labor Standards Act (FLSA)** U.S. law declaring the federal minimum wage and hour requirements for employees, along with overtime eligibility. It also divides employees into exempt and non-exempt (regarding eligibility for overtime pay).

**Family and Medical Leave Act (FMLA)** U.S. law that permits employees to take unpaid time away from work to address health and family matters.

**First-Use (Fiber)** Fiber that has been produced (pulped) directly from wood and is being used in its first "cycle" — prior to typically being recaptured and recycled back into fiber-based products like paper, containerboard, tissue and similar.

**Forest Stewardship Council (FSC)** An international sustainable forestry non-governmental organization, known for their voluntary standards on the topic. PCA has earned chain of custody and controlled wood certifications from FSC.

**Fossil Fuel** Fuels such as gas, oil, coal, petroleum, kerosene, propane, etc. Naturally found, finite resources used for energy production.

**FSSC 22000** Food Safety System Certification 22000. Non-governmental organization that produces food safety standards, which are benchmarked and accepted by the Global Food Safety Initiative. Fastest-growing standards in terms of adoption in the U.S. and Europe. PCA's full-line packaging operations are predominantly certified to FSSC 22000.

**Global Food Safety Initiative (GFSI)** Initiative created by food industry and retail leaders to collaboratively drive continuous improvement in food safety management systems around the world.

**Green Ton** Weight of trees as they are harvested with full moisture content, about 50% water weight.

**Greenhouse Gas (GHG)** Gases like carbon dioxide, methane, nitrous oxide and chlorofluorocarbons (CFCs) that absorb and emit radiant energy.

**Indirect Emissions (Scope 2)** Emissions from the consumption of purchased electricity, steam, energy, etc., generated upstream of, but purchased by, PCA.

**International Union for Conservation of Nature (IUCN)** Considers itself the global authority on the status of the natural world and measures to safeguard it.

**Kraft** A paper- and paperboard-making process that utilizes cooking (rather than mechanical processes) to produce wood pulp from solid wood. Frequently used to produce high-strength paper and paperboard from softwood (coniferous) timber. Frequently employed to produce linerboard (the outer facings of corrugated fiberboard).

**Linerboard** Containerboard specifically produced to be utilized as an outer facing in corrugated fiberboard and packaging.

# appendix

**Lost Time Case Rate (LTCR)** A mathematical calculation that describes the number of lost time cases per 100 full-time employees in any given timeframe.

**Materiality** Determination of that which is relevant or significant.

**Metric Ton (Tonne)** A unit of weight equal to 2,204 pounds or 1,000 kilograms. Differentiated from a short ton, which is equal to 2,000 pounds.

**MRR** Mandatory Reporting Regulation. EPA-issued regulations regarding mandatory reporting on GHG, defining what must be reported and by whom.

**NatureServe** A network of scientists who collect decision-quality data about species and ecosystems. Used by PCA to protect biodiversity-rich areas.

**NO<sub>x</sub>** Term used to refer to nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) that are produced when fuel is burned. It can contribute to smog and have health implications.

**Occupational Safety and Health Administration (OSHA)** U.S. Department of Labor group charged with ensuring safe and healthy working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance.

**Old Corrugated Containers (OCC)** Used corrugated packaging that has been recaptured for purposes of recycling. OCC has a recapture rate of between 85% and 95% in the U.S.

**Other Indirect Emissions (Scope 3)** Greenhouse gas emissions occurring in the value chain, upon which PCA may have some influence, but limited control.

**Particulate Matter (PM)** Microscopic solid particles or liquid droplets found in the air. Can impact respiratory health and air quality.

**Programme for the Endorsement of Forest Certification (PEFC)** PEFC is an international sustainable forestry standard/endorsement group and non-governmental organization. PEFC writes standards on the topic and recognizes other national or regional standards after benchmarking to their requirements. PCA has earned a chain of custody certificate from PEFC. PEFC recognizes and endorses SFI certification of fiber sourcing.

**Renewable Resources** Resources that can replenish themselves naturally over time, e.g., wood products.

**Safe Quality Food (SQF)** A food safety and quality program that produces food safety standards, several of which are benchmarked/accepted by the Global Food Safety Initiative. PCA Marshfield is certified to SQF Level 2.

**Semi-Chemical (Corrugating Medium)** Containerboard specifically produced to serve as corrugating medium (to be fluted and bonded into the center of a corrugated sheet). Produced with a combination of mechanical and chemical cooking processes.

**Short Ton (Net Ton)** A unit of weight equal to 2,000 pounds. Differentiated from the long (gross) ton, which is equal to 1,000 kilograms, or 2,240 pounds.

**SO<sub>2</sub>** Sulfur dioxide is formed when fuels like oil and coal are burned. In sufficient concentrations, its presence can lead to the acidification of water and soil.

**Stakeholder** An individual or entity that has a concern or interest in a business.

**Sustainability Accounting Standards Board (SASB)** Provides sustainability accounting standards. Controlled by a foundation, chaired by Michael Bloomberg from 2014–2018.

**Sustainable Forestry Initiative (SFI)** SFI is a North American non-governmental organization that supports sustainable forestry and writes standards on the subject. PCA has the chain of custody and several sourcing certifications.

**Terminations** Employees who have voluntarily or involuntarily left employment in the reporting year.

**Title VII of the Civil Rights Act of 1964** Federal law that prohibits employers from discriminating against employees on the basis of sex, race, color, national origin and religion.

**Total Case Rate (TCR), officially, Total Incidence Rate (TIR)** A mathematical calculation that describes the number of employees per 100 full-time employees who have suffered an injury or illness requiring medical treatment.

**Total Suspended Solids (TSS)** The dry weight of suspended particles that do not dissolve in water. These can be separated using a filter. Used to measure water quality.

**“Triple-Chain” (Triple Chain of Custody)** PCA’s mills and plants that are certified to all three sustainable forestry standards (SFI, PEFC and FSC) and are thus commonly referred to as triple chain of custody.

**Turnover** Percentage of employees who have voluntarily or involuntarily left employment in the reporting year.

**Vertically Integrated** A strategy and corporate architecture where a company owns and operates several operations or entities in order to manufacture from raw materials to finished/offered products. PCA is a vertically integrated packaging and paper company.

**WARN Act** Worker Adjustment and Retraining Notification Act of 1988. A U.S. labor law that protects employees by requiring employers to provide advance notice of closings and mass layoffs.

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