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A N N U A L R E P O R T

2018 Annual Stockholder Letter



Dear Stockholders,

Since Clearwater Paper became a standalone company over a decade ago, our core mission has remained the same – to be a cost-efficient, agile, and valued provider to retail companies and high-end packaged goods and commercial print sector suppliers.

In 2018, we generated \$1.7 billion in net sales, adjusted EBITDA of \$177 million, and cash flow from operations of \$169 million. Our results are a testament to the hard work of our exceptional team operating in an industry that is undergoing tremendous change, particularly in the tissue business. Despite significant challenges, we accomplished major milestones on the strategic priorities established for 2018:

- Implemented a regional operating model in our Consumer Products business, which is beginning to produce results by taking millions of miles off the road and reducing external warehousing costs;
- Accelerated the start-up of converting lines in Shelby, North Carolina, which has reduced transportation costs;
- Sold our recycled tissue mill in Ladysmith, Wisconsin, to focus on producing premium and ultra-quality tissue for the retail market; and
- Realized \$10 million in annual run-rate benefit in 2018, and we continue to work towards realizing the full benefits from, our continuous pulp digester at our mill in Lewiston, Idaho.

Additionally, we

- Achieved an annual run-rate of \$20 million of annual savings from restructuring our sales, general, and administrative areas;
- Negotiated our debt covenants to provide the flexibility needed to execute on our strategic priorities; and
- Won industry awards for energy efficiencies, greenhouse gas reductions, and environmental stewardship.

Looking ahead, we expect that 2019 will be a year of transition. As we manage through headwinds in the consumer business, we are looking to capitalize on our strategic investments to reduce costs and ramp tissue production at our Shelby mill. We continue to believe in the long-term industry fundamentals in both the tissue and paperboard businesses.

I look forward to sharing our progress with you throughout 2019 and beyond, as we work to build a stronger company for our employees, produce high quality products for our customers, enrich the communities in which we operate, and create value for our stockholders.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda K. Massman".

Linda K. Massman
President and CEO

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Form 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____
Commission File Number: 001-34146

CLEARWATER PAPER CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

20-3594554

(State or other jurisdiction of incorporation or organization)

(IRS Employer Identification No.)

601 W. Riverside Avenue, Suite 1100

Spokane, Washington

99201

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (509) 344-5900

Securities registered pursuant to Section 12(b) of the Act:

TITLE OF EACH CLASS
Common Stock (\$0.0001 par value per share)

NAME OF EACH EXCHANGE ON WHICH REGISTERED
New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

As of June 30, 2018 (the last business day of the registrant's most recently completed second quarter), the aggregate market value of the common stock held by non-affiliates of the registrant was \$373.9 million. Shares of common stock beneficially held by each officer and director and by each person who owns 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 11, 2019, 16,515,156 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement to be filed on or about April 2, 2019, with the Securities and Exchange Commission in connection with the registrant's 2019 Annual Meeting of Stockholders are incorporated by reference in Part III hereof.

CLEARWATER PAPER CORPORATION

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Part I

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Our disclosure and analysis in this report contains, in addition to historical information, certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding production quality and quantity, costs and timing associated with the expansion of our Shelby, North Carolina facility; our strengths and related benefits; our strategy; pulp production and the continuous digester at our Idaho facility; competitive market conditions, raw materials and input usage and costs, including energy costs and usage; selling, general and administrative cost reduction benefits; strategic projects and related costs and benefits; energy conservation; cash flows; capital expenditures; return on investment from capital projects; tax rates; operating costs; selling, general and administrative expenses; timing of and costs related to major maintenance and repairs; liquidity; benefit plan funding levels; capitalized interest; and interest expenses. Words such as “anticipate,” “expect,” “intend,” “plan,” “target,” “project,” “believe,” “schedule,” “estimate,” “may,” and similar expressions are intended to identify such forward-looking statements. These forward-looking statements are based on management’s current expectations, estimates, assumptions and projections that are subject to change. Our actual results of operations may differ materially from those expressed or implied by the forward-looking statements contained in this report. Important factors that could cause or contribute to such differences in operating results include those risks discussed in Item 1A of this report, as well as the following:

- competitive pricing pressures for our products, including as a result of increased capacity as additional manufacturing facilities are operated by our competitors;
- the loss of, changes in prices in regard to, or reduction in, orders from a significant customer;
- changes in customer product preferences and competitors' product offerings;
- our ability to complete construction of our new tissue manufacturing operations in Shelby, North Carolina on time and within current cost expectations;
- customer acceptance and timing and quantity of purchases of our tissue products, including the existence of sufficient demand for and the quality of tissue produced by our expanded Shelby, North Carolina operations when they are completed;
- consolidation and vertical integration of converting operations in the paperboard industry;
- our ability to successfully implement our operational efficiencies and cost savings strategies, along with related capital projects, and achieve the expected operational or financial results of those projects, including from the continuous digester at our Lewiston, Idaho facility;
- changes in the cost and availability of wood fiber and wood pulp;
- changes in transportation costs and disruptions in transportation services;
- labor disruptions;
- changes in the U.S. and international economies and in general economic conditions in the regions and industries in which we operate;
- manufacturing or operating disruptions, including IT system and IT system implementation failures, equipment malfunctions and damage to our manufacturing facilities;
- changes in costs for and availability of packaging supplies, chemicals, energy and maintenance and repairs;
- larger competitors having operational and other advantages;
- cyclical industry conditions;
- changes in expenses, required contributions and potential withdrawal costs associated with our pension plans;
- environmental liabilities or expenditures;
- cyber-security risks;
- reliance on a limited number of third-party suppliers for raw materials;
- our ability to attract, motivate, train and retain qualified and key personnel;
- material weaknesses in our internal control over financial reporting;
- our substantial indebtedness and ability to service our debt obligations;
- restrictions on our business from debt covenants and terms; and
- changes in laws, regulations or industry standards affecting our business.

Forward-looking statements contained in this report present management's views only as of the date of this report. Except as required under applicable law, we do not intend to issue updates concerning any future revisions of management's views to reflect events or circumstances occurring after the date of this report. You are advised, however, to consult any further disclosures we make on related subjects in our quarterly reports on Form 10-Q and current reports on Form 8-K filed with the Securities and Exchange Commission, or SEC.

ITEM 1.

Business

GENERAL

Clearwater Paper manufactures quality consumer tissue, away-from-home (or AFH) tissue, parent roll tissue, bleached paperboard and pulp at manufacturing facilities across the nation. The Company is a premier supplier of private label tissue to major retailers and wholesale distributors, including grocery, drug, mass merchants and discount stores. In addition, the company produces bleached paperboard used by quality-conscious printers and packaging converters, and offers services that include custom sheeting, slitting and cutting. Clearwater Paper's employees build shareholder value by developing strong customer relationships through quality and service.

On December 16, 2016, we acquired Manchester Industries, or Manchester, an independently-owned paperboard sales, sheeting and distribution supplier to the packaging and commercial print industries. The addition of Manchester's customers to our paperboard business extended our reach and service platform to small and mid-sized folding carton plants, as we now offer a range of converting services that include custom sheeting, slitting and cutting. These converting operations include five strategically located facilities in Virginia, Pennsylvania, Indiana, Texas and Michigan.

On March 31, 2017, we permanently closed our Oklahoma City, Oklahoma converting facility.

On August 21, 2018, we completed the sale of our Ladysmith, Wisconsin tissue manufacturing facility to a private buyer.

Company Strengths

Leading private label tissue manufacturer with a broad U.S. footprint. Our Consumer Products business is a premier private label tissue manufacturer. We have through-air-dried, or TAD, tissue manufacturing facilities in Shelby, North Carolina and Las Vegas, Nevada, and non-TAD manufacturing facilities located in Lewiston, Idaho and Neenah, Wisconsin, as well as converting operations strategically located across the United States. In addition, in 2019 we expect to complete construction of a new NTT machine at our Shelby facility that will produce a variety of high-quality ultra-premium and premium bath, paper towel and napkin products. We believe we were the seventh largest tissue manufacturer in the North American tissue market as of December 31, 2018, based on tissue parent roll capacity. Our broad manufacturing footprint allows us to service a diverse customer base, on a cost effective basis, including major grocery store chains and retailers across the U.S.

High quality brand-equivalent tissue and other products to meet retailers' private label strategies. Our Consumer Products business produces high-quality products that match the quality of the leading national brands. We focus on high value tissue products across a wide variety of categories and retail channels. We also manufacture a broad range of cost-competitive consumer tissue products, as well as recycled tissue and tissue parent rolls.

High quality premium bleached paperboard products. Our Pulp and Paperboard business produces premium paperboard products with ultra-smooth print surfaces, superior cleanliness, and excellent forming and sealing characteristics. Products are available in several thicknesses to provide the level of rigidity and strength needed for a wide range of applications. The high quality of our paperboard allows buyers to use our products for packaging where branding and quality are critical, such as ice cream containers, drink cups, health and beauty packaging, pharmaceutical packaging, and point of purchase displays.

Long-standing customer relationships. Our Consumer Products business supplies private label tissue products to several of the largest national retail chains. Our top 10 Consumer Products customers in 2018 accounted for approximately 80% of our total consumer products net sales. The average tenure of these customer relationships was approximately 12 years. Our Consumer Products business served 69 customers in 2018 across a broad geographic area. We also have long-standing customer relationships with our paperboard customers. Our top 10 paperboard customers in 2018 accounted for approximately 40% of our total paperboard net sales. The average tenure of these customer relationships was approximately 30 years.

Strategically positioned Pulp and Paperboard facilities. Our Pulp and Paperboard mill in Lewiston, Idaho is one of only two solid bleach sulfate, or SBS, paperboard mills, and the only coated SBS paperboard mill, in the Western U.S. to offer a full range of specialized products to meet the needs of customers for traditional folding carton, plates, cups and liquid packaging products. This facility's geographic location reduces transportation costs to customers in North America as well as Asia, which allows us to compete on a cost-advantaged basis relative to East Coast producers. Our Cypress Bend, Arkansas mill is centrally located, which reduces transportation costs to the Midwestern and Eastern U.S. and complements the Lewiston mill in shipping to customers nationwide.

Largely integrated pulp and tissue operations. Our Consumer Products business sources a significant portion of its pulp supply internally from our pulp and paperboard operations in Idaho. This relationship provides our Consumer Products business with a secure pulp supply as well as significant transportation and drying cost savings, provides our pulp and paperboard business with a steady demand source and helps mitigate input cost volatility associated with purchasing external pulp.

Strategy

Our long-term strategy is to expand our business to meet the needs of our customers and optimize the profitability of both our consumer products business and our paperboard business. In the near-term, our focus is on successfully completing strategic capital projects, optimizing the operating efficiency and cost effectiveness of both segments of our company and reducing debt.

ORGANIZATION

Our businesses are organized into two operating segments: Consumer Products and Pulp and Paperboard. Additional information relating to the amounts of net sales, operating income, depreciation and amortization, identifiable assets and capital expenditures attributable to each of our operating segments for 2016-2018, as well as geographic information regarding our net sales, is set forth in Note 19, "Segment Information" to our consolidated financial statements included under Part II, Item 8 of this report.

Consumer Products Segment

Our Consumer Products segment manufactures and sells a complete line of at-home tissue products as well as AFH products. Our integrated manufacturing and converting operations and geographic footprint enable us to deliver a broad range of cost-competitive products with brand equivalent quality to our customers. In 2018, our Consumer Products segment had net sales of \$884.8 million. A listing of our Consumer Products segment facilities is included under Part I, Item 2 of this report.

Tissue Industry Overview

The U.S. tissue market can be divided into two market segments: the at-home or consumer retail purchase segment, which represented approximately two-thirds of our U.S. tissue sales in 2018; and the AFH segment, which represents the remaining one-third of U.S. tissue market sales and includes tissue for locations such as restaurants, hotels and office buildings.

The U.S. at-home tissue segment consists of bath, paper towels, facial and napkin products categories. Each category is further distinguished according to quality segments: ultra, premium, value and economy. As a result of manufacturing process improvements and consumer preferences, the majority of at-home tissue sold in the U.S. is ultra and premium quality.

At-home tissue producers are comprised of companies that manufacture branded tissue products, private label tissue products, or both. Branded tissue suppliers manufacture, market and sell tissue products under their own nationally branded labels. Private label tissue producers manufacture tissue products for retailers to sell as their store brand.

In the U.S., at-home tissue is primarily sold through grocery stores, mass merchants, warehouse clubs, drug stores and discount dollar stores. Tissue has historically been one of the strongest segments of the paper industry due to its steady demand growth largely due to population growth in the U.S., that occur in a number of other paper industry segments. In addition to economic and demographic drivers, tissue demand is affected by product innovations and shifts in distribution channels.

Our Consumer Products Business

We believe that we are the only U.S. consumer tissue manufacturer that solely produces a full line of quality private label tissue products for large retail trade channels. Most U.S. tissue producers manufacture only branded products, or both branded and private label products, or in the case of certain smaller or midsize manufacturers, only produce a limited range of tissue products or quality segments. Because we do not mass produce and market branded tissue products, we believe we are able to offer products that match the quality of leading national brands, but generally at lower prices. We utilize independent companies to routinely test our product quality.

In bathroom tissue, the majority of our sales are high quality two-ply ultra and premium products. In paper towels, we produce and sell ultra quality towels as well as premium and value towels. In the facial category, we sell ultra-lotion three-ply and a complete line of two-ply premium products, as well as value facial tissue. In napkins, we manufacture ultra two- and three-ply dinner napkins, as well as premium and value one-ply luncheon napkins. Value grade products utilizing recycled fiber are also produced for customers who wish to further diversify their product portfolio. We compete primarily in the at-home portion of the U.S. tissue market, which made up approximately 90% of our Consumer Products segment sales in 2018.

We manufacture and sell a line of AFH products to customers with commercial and industrial tissue needs. Products include conventional one- and two-ply bath tissue, two-ply paper towels, hard wound towels and dispenser napkins.

As of December 31, 2018, our consumer products were manufactured on 8 paper machines at four facilities located throughout the U.S. Parent rolls from our paper machines are then converted and packaged at our converting facilities located across the U.S. Two of our paper machines, located in Las Vegas, Nevada and Shelby, North Carolina, produce TAD tissue that we convert into national brand comparable, ultra quality towels and bath tissue. Our new paper machine in Shelby, which we expect to be completed in early 2019 and will be fully operational in 2020, will provide national brand comparable ultra-premium and premium quality towels and bath tissue.

We had one customer in the Consumer Products segment, the Kroger Company, that accounted for approximately 11.1% of our total consolidated net sales in 2018, approximately 15.3%, of our total consolidated net sales in 2017, and approximately 13.4%, of our total company net sales in 2016.

We sell private label tissue products through our own sales force and compete based on product quality, customer service and price. We deliver customer-focused business solutions by assisting in managing product assortment, category management, and pricing and promotion optimization.

Pulp and Paperboard Segment

Our Pulp and Paperboard segment manufactures and markets bleached paperboard for the high-end segment of the packaging industry and is a leading producer of SBS paperboard. It also offers services that include custom sheeting, slitting and cutting of paperboard. This segment also produces hardwood and softwood pulp, which is primarily used as the basis for our paperboard products, and slush pulp, which supplies to our Consumer Products segment. In 2018, our Pulp and Paperboard segment had net sales of \$839.4 million. A listing of our Pulp and Paperboard segment facilities is included under Part I, Item 2 of this report.

Pulp and Paperboard Industry Overview

SBS paperboard is a premium paperboard grade that is most frequently used to produce folding cartons, liquid packaging, cups and plates, blister and carded packaging, top sheet, and commercial printing items. SBS paperboard is used for such products because it is manufactured using virgin fiber combined with the kraft bleaching process, which results in superior cleanliness, brightness and consistency. SBS paperboard is often manufactured with a clay coating to provide superior surface printing qualities. We also have the capability to produce targeted grades with a percentage of post-consumer furnish. SBS paperboard can also be extrusion coated with a barrier film to provide moisture protection for some uses.

In general, the process of making paperboard begins by chemically cooking wood fibers to make pulp. The pulp is bleached to provide a white, bright pulp, which is formed into paperboard. Bleached pulp that is to be used as market pulp is dried and baled on a pulp drying machine, bypassing the paperboard machines. The various grades of paperboard are wound into rolls for converting to final end users. Liquid packaging and cup stock grades are often coated with polyethylene, a plastic coating, in a separate operation to create a resistant and durable liquid barrier.

Folding Carton Category. Folding carton is the largest portion of the SBS category of the U.S. paperboard industry, comprising approximately 40% of the category in 2018. Within the folding carton segment there are varying qualities of SBS paperboard. The high end of the folding carton category in general requires a premium print surface and includes uses such as packaging for pharmaceuticals, cosmetics and other premium retail goods. SBS paperboard is also used in the packaging of frozen foods, beverages and baked goods.

Liquid Packaging and Cup Category. SBS liquid packaging paperboard is primarily used in the U.S. for the packaging of juices. In Japan and other Asian countries, SBS liquid packaging paperboard is primarily used for the packaging of milk and a wide range of consumable liquids, including alcoholic beverages. The cup segment of the market consists primarily of hot and cold drink cups and food packaging. The hot and cold cups are primarily used to serve beverages in quick-service restaurants, while round food containers are often used for packaging premium ice-cream, hot noodle and dry food products.

Commercial Printing Category. Commercial printing applications use bleached bristols, which are heavyweight paper grades, to produce postcards, signage and promotional literature. Bristols can be clay coated on one side or both sides for applications such as brochures, presentation folders and paperback book covers. Customers in this segment are accustomed to high-quality paper grades, which possess superior printability and brightness compared to most paperboard packaging grades. Suppliers to this segment must be able to deliver small volumes, often within 24 hours.

Market Pulp. The majority of the pulp manufactured worldwide is used in paper and paperboard production, usually at the same mill location. In those cases where a paper mill is not paired with pulp production operations or requires pulp with different production qualities, it must purchase pulp on the open market. Market pulp is defined as pulp produced for sale to these customers and it excludes tonnage consumed by the producing mill or shipped to any of its affiliated mills within the same company.

Our Pulp and Paperboard Business

Our Pulp and Paperboard segment operates pulp and paperboard facilities in Idaho, which has two paperboard machines, and Arkansas, which has one paperboard machine. As of December 31, 2018, we were one of the four largest producers of bleached paperboard in North America with approximately 14% of the available production capacity. Additionally, we provide custom sheeting, slitting, and cutting of paperboard products from five converting facilities.

Our overall pulp and paperboard production consists primarily of folding carton, liquid packaging, cup and plate products, blister and carded packaging, top sheet, commercial printing grades and hardwood and softwood pulp.

Folding carton board used in pharmaceuticals, cosmetics and other premium packaging, such as those that incorporate foil and holographic lamination, accounts for the largest portion of our total paperboard sales. We focus on high-end folding carton applications where the heightened product quality requirements provide for differentiation among suppliers, generally resulting in margins that are more attractive than less demanding packaging applications.

Our liquid packaging paperboard is known for its cleanliness and printability, and is engineered for long-lived performance due to its three-ply, softwood construction. Our reputation for producing liquid packaging meeting the most demanding standards for paperboard quality and cleanliness has resulted in meaningful sales in Japan, where consumers have a particular tendency to associate blemish-free, vibrant packaging with the cleanliness, quality and freshness of the liquids contained inside.

We also sell cup stock and plate stock grades for use in standard food service products.

With the exception of our capability to supply just-in-time sheeting and narrow rolls, we do not produce converted paperboard end-products, so we are not simultaneously a supplier of and a competitor to our customers in key market segments, notably folding carton and cup. Of the five largest SBS paperboard producers in the U.S., we are the only producer that does not convert SBS paperboard into folding cartons, cups, plates, or liquid packaging end-use products. We position our independent status to attract a diverse group of loyal customers because when there is increased market demand for paperboard, we do not divert our production to internal uses.

We can convert paperboard parent rolls to flat sheets and narrow rolls, which expands our in-market service capabilities and allows us to support small and mid-sized folding carton converters that buy sheeted paperboard to convert into packaging end-products. Providing a service platform in this way expands the key folding carton segment of our business and does not compete with our customers in other key market segments.

At our Idaho facility we produce bleached softwood pulp primarily for internal use, including in our Consumer Products segment.

With the recent installation of a continuous pulp digester at our Idaho facility, our pulp mills are capable of producing approximately 904,000 tons of pulp on an annual basis. We completed the continuous pulp digester installation at our Idaho facility at the end of the third quarter of 2017. In 2018, we produced approximately 838,000 tons of pulp in the aggregate and utilized approximately 81% of that production, or approximately 680,000 tons, to produce approximately 810,000 tons of paperboard. The increase in tonnage from pulp to paperboard production is due to the addition of coatings and other manufacturing processes. We also used approximately 19% of our pulp production, or approximately 156,000 tons, in our Consumer Products segment to produce tissue products. The remaining pulp production of less than 1%, or approximately 2,000 tons, was sold externally by our Consumer Products segment.

We utilize various methods for the sale and distribution of our paperboard and softwood pulp. The majority of our paperboard is sold to packaging converters domestically through sales managers located throughout the U.S., with a smaller percentage channeled through distribution to commercial printers. Additionally, we directly sell sheeted paperboard products to folding carton converters, merchants and commercial printers. The majority of our international paperboard sales are conducted through sales agents and are primarily denominated in U.S. dollars. Our principal methods of competing are product quality, customer service and price.

RAW MATERIALS AND INPUT COSTS

For our manufacturing operations, the principal raw material used is wood fiber, which consists of purchased pulp and chips, sawdust and logs. In 2018, our Consumer Products segment sourced approximately 51% of its total pulp supply internally, with the remainder purchased from external suppliers. We own and operate a wood chipping facility located in Clarkston, Washington, near our Lewiston, Idaho, facility, which we believe bolsters our wood fiber position and provides short-term and long-term cost savings.

We utilize a significant amount of chemicals in the production of pulp and paper, including caustic, polyethylene, starch, sodium chlorate, latex and specialty process paper chemicals. A portion of the chemicals used in our manufacturing processes, particularly in the pulp-making process, are petroleum-based or are impacted by petroleum prices.

Transportation is a significant cost input for our business. Fuel prices, mileage driven and line-haul rates impact our transportation costs for delivery of raw materials to our manufacturing facilities, internal inventory transfers and delivery of our finished products to customers.

We consume substantial amounts of energy, such as electricity, hog fuel, steam and natural gas. We purchase a significant portion of our natural gas and electricity under supply contracts, most of which are between a specific facility and a specific local provider. Under most of these contracts, the providers have agreed to provide us with our requirements for a particular type of energy at a specific facility. Most of these contracts have pricing mechanisms that adjust or set prices based on current market prices. In addition, we use firm-price contracts to mitigate price risk for certain of our energy requirements.

As a significant producer of private label consumer tissue products, we also incur expenses related to packaging supplies used for retail chains, wholesalers and cooperative buying organizations.

Our maintenance and repairs are expensed as incurred. We perform routine maintenance on our machines and equipment and periodically replace a variety of parts such as motors, pumps, pipes and electrical parts.

We also record depreciation expense associated with our plant and equipment.

Further information regarding our raw material and input costs is included under "Operating Costs" within Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this report.

SEASONALITY

Our Consumer Products segment experiences a decrease in shipments during the fourth quarter generally as a result of decreased consumer demand, retail brand holiday promotions, and end of year inventory management by non-retail customers. In addition, customer buying patterns for our paperboard generally result in lower sales for certain grades of our Pulp and Paperboard segment during the first and fourth quarters, when compared to the second and third quarters of a given year.

ENVIRONMENTAL

Information regarding environmental matters is included under Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this report, and is incorporated herein by reference.

WEBSITE

Interested parties may access our periodic and current reports filed with the SEC, at no charge, by visiting our website, www.clearwaterpaper.com. In the menu select "Investor Relations," then select "Financial Information & SEC Filings." Information on our website is not part of this report.

EMPLOYEES

As of December 31, 2018, we had approximately 3,130 employees, of which approximately 1,750 were employed by our Consumer Products segment, approximately 1,230 were employed by our Pulp and Paperboard segment, and approximately 150 were corporate administration employees. This workforce consisted of approximately 710 salaried employees and approximately 2,420 hourly and fixed rate employees. As of December 31, 2018, approximately 48% of our workforce was covered under collective bargaining agreements.

Unions represent hourly employees at three of our manufacturing sites. We had three hourly union labor contracts that expired in 2017 and 2018 and are currently being renegotiated:

CONTRACT EXPIRATION DATE	DIVISION AND LOCATION	UNION	APPROXIMATE NUMBER OF HOURLY EMPLOYEES
August 31, 2017	Consumer Products Division & Pulp & Paperboard Division - Lewiston, Idaho	United Steel Workers (USW)	855
August 31, 2017	Consumer Products Division & Pulp & Paperboard Division - Lewiston, Idaho	International Brotherhood of Electrical Workers (IBEW)	60
May 31, 2018	Pulp & Paperboard Division - Lewiston, Idaho, No. 4 Power Boiler Unit	International Association of Machinists (IAM)	30

The following hourly union labor contract expires in 2019:

CONTRACT EXPIRATION DATE	DIVISION AND LOCATION	UNION	APPROXIMATE NUMBER OF HOURLY EMPLOYEES
July 31, 2019	Pulp & Paperboard Division - Cypress Bend, Arkansas	United Steel Workers (USW)	260

EXECUTIVE OFFICERS OF THE REGISTRANT

The following individuals are deemed our “executive officers” under the Securities Exchange Act of 1934 as of December 31, 2018. Executive officers of the company are generally appointed as such at the annual meeting of our board, and each officer holds office until the officer’s successor is duly elected and qualified or until the earlier of the officer’s death, resignation, retirement, removal by the board or as otherwise provided in our bylaws. There are no arrangements or understandings between any of our executive officers and any other persons pursuant to which they were selected as officers. No family relationships exist among any of our executive officers.

Linda K. Massman (age 52), has served as President and Chief Executive Officer, as well as a director, since January 2013. Ms. Massman served as President and COO from November 2011 to December 2012. She served as CFO and Senior Vice President, Finance from May 2011 to November 2011, and as CFO and Vice President, Finance from December 2008 to May 2011. From September 2008 to December 2008, Ms. Massman served as Vice President of Potlatch Corporation pending completion of the spin-off of Clearwater Paper Corporation. From May 2002 to August 2008, Ms. Massman was Group Vice President, Finance and Corporate Planning, for SUPERVALU Inc., a grocery retail company. In 2017, Ms. Massman served in the position of board chair for the American Forest & Paper Association (AF&PA), the national trade association of the forest products industry. Ms. Massman has served as a director of TreeHouse Foods, Inc. (NYSE:THS) since July 2016 and is a member of its Audit Committee. She served as a member of their Nominating and Governance Committee from 2016 to 2018. Ms. Massman also served as a director of Black Hills Corporation (NYSE: BKH), an energy company, from January 2015 to July 2018 and was a member of its Compensation Committee.

John D. Hertz (age 52) joined the company in June 2012 as Senior Vice President, and has served as Senior Vice President, Finance and Chief Financial Officer since August 2012. From June 2010 to June 2012, Mr. Hertz was the Vice President and Chief Financial Officer of Novellus Systems, Inc. From October 2007 to June 2010, he served as Novellus’ Vice President of Corporate Finance and Principal Accounting Officer and as Vice President and Corporate Controller from June 2007 to October 2007. From 2000 to 2007, Mr. Hertz worked for Intel Corporation where he held a number of positions, including Central Finance Controller of the Digital Enterprise Group, Finance Controller of the Enterprise Platform Services Division and Accounting Policy Controller. Prior to that, Mr. Hertz was a Senior Manager with KPMG LLP.

Steve M. Bowden (age 55) has served as Senior Vice President, General Manager, Pulp and Paperboard Division since October 1, 2018. Prior to joining the company, from September 2016 to November 2017, Mr. Bowden was the North American Region Vice President - Labels for Constantia Fleibles, which was subsequently acquired by the Multi-Color Corporation at which he served as President, North America Food and Beverage Division from November 2017 to September 2018. From March 2013 to September 2016, Mr. Bowden was President and COO of Quality Associates, a contract packager. From March 2010 to September 2013, Mr. Bowden was the Executive Vice President, Marketing and Strategy of xpedx, a division of International Paper focused on the print, packaging, and facility supplies product segments. Mr. Bowden worked for International Paper for more than twenty-six years, including in sales management and as a manager of a coated paperboard mill.

Michael S. Gadd (age 54) has served as Senior Vice President since May 2011 and General Counsel and Corporate Secretary since December 2008. He served as Vice President from December 2008 to May 2011. From March 2006 to December 2008, Mr. Gadd served as Associate General Counsel of Potlatch Corporation, and served as Corporate Secretary of Potlatch from July 2007 to December 2008. From January 2001 to January 2006, Mr. Gadd was an attorney with Perkins Coie, LLP in Portland, Oregon.

Arsen S. Kitch (age 37) has served as Senior Vice President, General Manager, Consumer Products Division since May 2018 and served as Vice President, General Manager, Consumer Products Division from January 2018 to May 2018. He served as Vice President, Finance from January 2015 through December 2017, and served as Senior Director, Strategy and Planning from August 2013 through December 2014. Mr. Kitch was with Nestlé, a food manufacturer, from 2011 to 2013 including as a Finance Director in his final position.

Kari G. Moyes (age 51) has served as Senior Vice President, Human Resources since February 2015, and served as Vice President, Labor Relations from July 2013 through January 2015. From November 2010 through June 2013, Ms. Moyes served as National Director of Human Resources for Nestlé. Prior to her tenure with Nestle, Ms. Moyes spent 10 years with PepsiCo in various capacities.

ITEM 1A. Risk Factors

Our business, financial condition, results of operations and liquidity are subject to various risks and uncertainties, including those described below, and as a result, the trading price of our common stock could decline.

Increases in tissue supply, particularly in the premium and ultra categories, could adversely affect our operating results and financial condition.

Over the past few years, several new or refurbished premium and ultra-quality tissue paper machines have been completed or announced by us and by our competitors, including private label competitors, which will result in a substantial increase in the supply of premium and ultra-quality tissue in the North American market. Additionally, several new or refurbished conventional tissue machines have been installed or announced, including as a result of foreign competitors increasing their presence and operations in North America. We believe that increasing tissue capacity, together with intensifying competition experienced by our retail customers, has made it difficult for us to pass through to our customers the significant increases in input costs we have experienced in the last several years. If demand for tissue products in the North American market does not increase or consumer purchasing of premium and ultra-quality tissue do not increase commensurate with the increased capacity, the increase in supply of ultra-quality tissue products could have a material adverse effect on the price of premium and ultra-quality tissue products. In addition, increased supply of premium and ultra-quality tissue may adversely affect the market prices for such tissue and result in the displacement of demand for conventional tissue, which could adversely affect the market price for conventional tissue products, which will continue to represent a significant portion of our total production for the foreseeable future.

The loss of, or a significant reduction in, orders from, or changes in prices in regards to, any of our large customers could adversely affect our operating results and financial condition.

We derive a substantial amount of revenues from a concentrated group of customers. For example, our top 10 consumer products customers in 2018 accounted for approximately 80% of our total consumer products net sales. We have experienced increased price and promotion competition in our consumer products business, particularly in regards to ultra-quality products, and this competition has decreased our gross margins and adversely affected our financial condition. Our paperboard sales are also concentrated, with the top 10 paperboard customers in 2018 accounting for approximately 40% of our total paperboard net sales. If we lose any of these customers or a substantial portion of their business or if the terms of our relationship with any of them becomes less favorable to us, our net sales would decline, which would harm our results of operations and financial condition. Some of our customers have the capability to produce the parent rolls or products that they purchase from us.

We generally do not have long-term contracts with many of our customers that ensure a continuing level of business from them. In addition, our agreements with our customers, including our largest customers, are not exclusive and generally do not contain minimum volume purchase commitments. Our relationship with our largest and most important customers will depend on our ability to continue to meet their needs for quality products and services at competitive prices. If we lose one or more of these customers or if we experience a significant decline in the level of purchases by any of them, we may not be able to quickly replace the lost business volume and our operating results and business could be harmed. In the third quarter of 2017, our largest tissue customer made the decision to go from a single source model to a multi-source model for its private label tissue supply beginning in the first quarter of 2018, which significantly affected sales volumes for our conventional tissue in 2018.

Competitors' branded products and private label products could have an adverse effect on our financial results.

Our consumer products compete with well-known, branded products, as well as other private label products. Our business may be harmed by new product offerings by competitors, the effects of consolidation within retailer and distribution channels, and price competition from companies that may have greater financial resources than we do. If we are unable to offer our existing customers, or new customers, tissue products comparable to branded products or other companies' private label products in terms of quality, customer service, and/or price, we may lose business or we may not be able to grow our existing business and be forced to sell lower-margin products, all of which could negatively affect our financial condition and results of operations.

Changing retail purchasing patterns have increased the need to increase operating efficiencies and diversify our customer base and sales channels.

We have historically sold a majority of our consumer tissue products through retail grocery stores. These and other traditional retail outlets are facing increasingly intense competition from supercenters, club stores, wholesale grocers, and drug, dollar, variety and specialty stores, as well as competitors who have incorporated the internet as a direct-

to-consumer channel and internet-only providers that sell tissue and other grocery products. The intense competition faced by our customers has resulted in increased efforts by them to reduce costs from suppliers like us and requires that we become more cost efficient in order to maintain our market share and profitability. The changing retail landscape also requires that we develop and maintain relationships with a wider variety of retailers and retail channels to succeed in this dynamic environment.

The expansion of our business through the construction of new tissue making and converting facilities may not proceed as anticipated.

In connection with our long-term expansion strategy, we are adding a paper machine capable of producing certain premium and ultra-premium quality tissue products, and have added converting facilities to our Shelby, North Carolina site. The tissue machine being installed in North Carolina is highly complex and costly and it can be manufactured by only one company in the world. Installing this machine and building the supporting facilities entails numerous risks, including difficulties in completing the project on time due to construction or permitting issues, cost overruns, difficulties in integrating the new operations and personnel, and uncertainties regarding the existence of sufficient customer demand and acceptance of the quality of the tissue produced once the new paper machine becomes operational. Any of these risks, if realized, could have a material adverse effect on our business, financial condition, results of operations and liquidity. In addition, such events could also divert management's attention from other business concerns. We did experience significant cost overruns for the Shelby expansion in 2018.

Consolidation in the North American paperboard and converting industry may adversely affect our business.

The ongoing consolidation of paperboard and paperboard converting businesses, including through the acquisition and integration of such converting businesses by larger competitors of ours, could result in a loss of customers and sales in our pulp and paperboard business. A loss of paperboard customers or sales as a result of consolidations and integrations could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our operational efficiency optimization and cost-saving goals may not be fully achieved or may not support the level of investment or commitment we are making.

Our near term strategy of improving our competitive position by investing to achieve increased operational efficiencies and implementing cost control measures may not be fully achieved. Those goals, along with the capital projects we have invested in or are investing in to help achieve these goals, including the recently installed continuous digester at our Lewiston facility and warehouse automation at several facilities, may not achieve expected operational or financial results in the time frames we anticipate, or at all. Such delays or failures could materially affect our business, cash flows and financial condition. The continuous digester in Lewiston is currently delivering significantly less in expected financial benefits and we continue to work to achieve the expected operational and financial benefits of the digester project.

Our business and financial performance may be harmed by future labor disruptions.

As of December 31, 2018, approximately 48% of our full-time employees were represented by unions under collective bargaining agreements. As these agreements expire, we may not be able to negotiate extensions or replacement agreements on terms acceptable to us. In 2018 and 2017, collective bargaining agreements for hourly employees at our Lewiston, Idaho facility, which affects approximately 945 employees, expired and are currently being re-negotiated. Any failure to reach an agreement with one of the unions may result in strikes, lockouts, work slowdowns, stoppages or other labor actions, any of which could have a material adverse effect on our operations and financial results.

We depend on external sources of wood pulp and wood fiber for a significant portion of our tissue production, which subjects our business and results of operations to potentially significant fluctuations in the price of market pulp and wood fiber.

Our Consumer Products segment sources a significant portion of its wood pulp requirements from external suppliers, which exposes us to price fluctuation. In 2018, we sourced approximately 49% of our pulp requirements for tissue manufacturing externally, comprising approximately 10.9% of our consolidated net sales.

Pulp prices can, and have, changed significantly from one period to the next. The volatility of pulp prices can adversely affect our earnings if we are unable to pass cost increases on to our customers or if the timing of any price increases for our products significantly trails the increases in pulp prices. In 2018, we were largely unable to pass on these pulp price increases to our customers due to competitive conditions in the consumer tissue industry.

Wood fiber is the principal raw material used to create wood pulp, which in turn is used to manufacture our pulp and paperboard products and consumer products. In 2018, our wood fiber costs were 9.6% of our consolidated net sales. Wood fiber pricing is subject to regional market influences, and our cost of wood fiber may increase in the areas our pulp and paperboard facilities are located due to market shifts in those regions. For example, much of the wood fiber we use in our pulp manufacturing process in Lewiston, Idaho, is the by-product of sawmill operations. As a result, the price of these residual wood fibers is affected by operating levels in the lumber industry. Significant reductions in home building during the past decade resulted in the closure or curtailment of operations at many sawmills and consolidation amongst suppliers. Further, the expansion of operations and production of other paper mills and wood pellet manufacturers in the Inland Northwest region of the United States has increased the demand and price for wood fiber. Additionally, the ability of paper and wood pellet mills in British Columbia to acquire wood fiber from the U.S. Inland Northwest region with limited to no reciprocal ability by U.S. mills to acquire wood fiber from British Columbia, reduces the supply of, and increases the costs, for wood fiber. The price of wood fiber is expected to remain volatile.

The primary source for wood fiber is timber, the availability of which may be limited by adverse weather, fire, insect infestation, disease, ice storms, wind storms, flooding and other natural and man-made causes, thereby reducing supply and increasing prices. For example, our Arkansas pulp and paperboard facility relies on whole log chips for a significant portion of its wood fiber, and in the past this facility has experienced increases in the costs for wood fiber due to extremely wet conditions in the Southeastern U.S. that limited accessibility and availability.

The effects on market prices for wood fiber resulting from various governmental programs involving tax credits or payments related to biomass and other renewable energy projects or from environmental litigation or regulation are uncertain and could result in a reduction in the supply of wood fiber available for our pulp and paperboard manufacturing operations. Additionally, wood pellet facilities or fluff pulp facilities, can increase demand and prices for wood fiber. If we and our pulp suppliers are unable to obtain wood fiber at favorable prices or at all, our costs will increase and our operations and financial results may be harmed.

Disruptions in transportation services or increases in our transportation costs could have a material adverse effect on our business.

Our business, particularly our consumer products business, is dependent on transportation services to deliver our products to our customers and to deliver raw materials to us as well as for intercompany shipments of parent rolls. Shipments of products and raw materials may be delayed or disrupted due to weather conditions, labor shortages or strikes, regulatory actions or other events. If our transportation providers are unavailable or fail to deliver our products in a timely manner, we may incur increased costs and we may be unable to manufacture and deliver our products on a timely basis.

The costs of these transportation services are also affected by geopolitical and economic events. In 2018, our transportation costs were 11.9% of our consolidated net sales, with those costs spiking in the second half of 2018 as the result of higher line haul rates, diesel prices and weather related events. We have not been able in the past, and may not be able in the future, to pass along part or all of any fuel price increases to customers. If we are unable to increase our prices as a result of increased fuel or transportation costs, our gross margins may be materially adversely affected.

United States and global economic conditions could have adverse effects on the demand for our products and financial results.

U.S. and global economic conditions and currency exchange rates have a significant impact on our business and financial results. Recessed global economic conditions and a strong U.S. dollar can affect our business in a number of ways, including causing declines in global demand for consumer tissue and paperboard, and increased competition from foreign manufacturers in the U.S. market.

We incur significant expenses to maintain our manufacturing equipment and any interruption in the operations of our facilities may harm our operating performance.

We regularly incur significant expenses to maintain our manufacturing equipment and facilities. The machines and equipment that we use to produce our products are complex, have many parts and some are run on a continuous basis. We must perform routine maintenance on our equipment and will have to periodically replace a variety of parts such as motors, pumps, pipes and electrical parts. In addition, our pulp and paperboard facilities require periodic shutdowns to perform major maintenance. These scheduled shutdowns of facilities result in decreased sales and increased costs in the periods in which they occur and could result in unexpected operational issues in future periods as a result of changes to equipment and operational and mechanical processes made during the shutdown period. We had two scheduled major maintenance shutdowns in 2017, which occurred during the second quarter at our Arkansas facility and the third quarter at our Lewiston, Idaho pulp and paperboard facility. We did not have any major

maintenance shutdowns in 2018, but in 2019 we expect to have scheduled major maintenance at our Arkansas facility in the fourth quarter and at our Idaho facility in the third quarter.

Unexpected production disruptions could cause us to shut down or curtail operations at any of our facilities. For example, we had a fire at our Shelby, North Carolina facility in the first quarter of 2017 and the impregnation vessel that feeds our continuous digester at our Idaho facility plugged in the fourth quarter of 2018. Disruptions could occur due to any number of circumstances, including prolonged power outages, mechanical or process failures, shortages of raw materials, natural catastrophes, disruptions in the availability of transportation, labor disputes, terrorism, changes in or non-compliance with environmental or safety laws and the lack of availability of services from any of our facilities' key suppliers. Any facility shutdowns may be followed by prolonged startup periods, regardless of the reason for the shutdown. Those startup periods could range from several days to several weeks, depending on the reason for the shutdown and other factors. Any prolonged disruption in operations at any of our facilities could cause significant lost production, which would have a material adverse effect on our results of operations.

The cost of chemicals and energy needed for our manufacturing processes significantly affects our results of operations and cash flows.

We use a variety of chemicals in our manufacturing processes, including petroleum-based polyethylene and certain petroleum-based latex chemicals. In 2018, our chemical costs were 10.0% of our consolidated net sales. Prices for these chemicals have been and are expected to remain volatile. In addition, chemical suppliers that use petroleum-based products in the manufacture of their chemicals may, due to supply shortages and cost increases, ration the amount of chemicals available to us, and therefore we may not be able to obtain at favorable prices the chemicals we need to operate our business, if we are able to obtain them at all.

Our manufacturing operations also utilize large amounts of electricity and natural gas. In 2018, our energy costs were 4.9% of our consolidated net sales. Energy prices have fluctuated widely over the past decade, which in turn affects our cost of sales. For example, we experienced a dramatic spike in prices for natural gas at our Lewiston, Idaho facility in the first quarter of 2019 due to frigid temperatures in the Pacific Northwest as well as due to limited capacity on a major pipeline that supplies the Pacific Northwest resulting from damage to that pipeline that occurred in Canada. We purchase on the open market a substantial portion of the natural gas necessary to produce our products, and, as a result, the price and other terms of those purchases are subject to change based on factors such as worldwide supply and demand, geopolitical events, government regulation, weather, interruptions in pipeline and other delivery systems and natural disasters. Our energy costs in future periods will depend principally on our ability to produce a substantial portion of our electricity needs internally, on changes in market prices for natural gas and on reducing energy usage. Any significant energy shortage or significant increase in our energy costs in circumstances where we cannot raise the price of our products could have a material adverse effect on our results of operations. Any disruption in the supply of energy could also affect our ability to meet customer demand in a timely manner and could harm our reputation and our business.

Larger competitors have operational and other advantages over our operations.

The markets for our products are highly competitive, and companies that have substantially greater financial resources compete with us in each market. Some of our competitors have advantages over us, including lower raw material and labor costs and better access to the inputs of our products.

Our consumer products business faces competition from companies that produce the same type of products that we produce or that produce alternative products that customers may use instead of our products. Our consumer products business competes with the branded tissue products producers, such as Procter & Gamble, and branded label producers who manufacture branded and private label products, such as Georgia-Pacific and Kimberly-Clark. These companies are far larger than us, have more sales, marketing and research and development resources than we do, and enjoy significant cost advantages due to economies of scale. In addition, because of their size and resources, these companies may foresee market trends more accurately than we do and develop new technologies that render our products less attractive or obsolete.

Our ability to successfully compete in the pulp and paperboard industry is influenced by a number of factors, including manufacturing capacity, general economic conditions and the availability and demand for paperboard substitutes. Our pulp and paperboard business competes with WestRock, Georgia-Pacific, and international producers, most of whom are much larger than us. Any increase in manufacturing capacity by any of these or other producers could result in overcapacity in the pulp and paperboard industry, which could cause downward pressure on pricing. For example, several newer facilities in China have large paperboard manufacturing capacities, the output of which increases paperboard supplies on the international market. Also, a large European manufacturer recently completed a paperboard facility that exports into the North American market and another has converted a U.S. facility into a facility that produces SBS paperboard for the North American market. Increased production by foreign manufacturers may result in increased competition in the North American paperboard markets from direct sales by foreign competitors into these markets or increased competition in the U.S. as domestic manufacturers seek increased U.S. sales to offset displaced overseas sales caused by increased sales by foreign suppliers into Asia and European markets. Furthermore, customers could choose to use types of paperboard that we do not produce or could rely on alternative materials, such as plastic, for their products. An increased supply of any of these products could cause us to lower our prices or lose sales to competitors, either of which could have a material adverse effect on our results of operations and cash flows.

Cyclical industry conditions have in the past affected and may continue to adversely affect the operating results and cash flows of our pulp and paperboard business.

Our pulp and paperboard business has historically been affected by cyclical market conditions. We may be unable to sustain pricing in the face of weaker demand, and weaker demand may in turn cause us to take production downtime. In addition to lost revenue from lower shipment volumes, production downtime causes unabsorbed fixed manufacturing costs due to lower production levels. Our results of operations and cash flows may be materially adversely affected in a period of prolonged and significant market weakness. We are not able to predict market conditions or our ability to sustain pricing and production levels during periods of weak demand.

We rely on information technology in critical areas of our operations, and a disruption relating to such technology could harm our financial condition.

We use information technology, or IT, systems in various aspects of our operations, including enterprise resource planning, or ERP, management of inventories and customer sales. Some of these systems have been in place for long periods of time. We have different legacy IT systems that we are continuing to integrate. If one of these systems was to fail or cause operational or reporting interruptions, or if we decide to change these systems or hire outside parties to provide these systems, we may suffer disruptions, which could have a material adverse effect on our manufacturing and sales operation, results of operations and financial condition. In addition, we may underestimate the costs and expenses of developing and implementing new systems.

We may be required to pay material amounts under multiemployer pension plans; one of the plans in which we participate is in "critical and declining" financial status and this subjects us to potential liabilities, particularly if we withdraw from this plan.

We contribute to two multiemployer pension plans. The amount of our annual contributions to these plans is negotiated with the union representing our employees covered by the plan. In 2018, we contributed approximately \$6 million to these plans. If in future years we continue to participate in these plans, we may be required to make increased annual contributions, which would reduce the cash available for business and other needs. The decision whether to continue to participate in these multiemployer plans does not rest solely with us; rather, it is negotiated as part of the collective bargaining agreements with labor unions that participate in these plans. There are risks associated with both continuing to participate in multiemployer plans and with withdrawing from multiemployer plans.

If we were to withdraw partially or completely from a multiemployer plan that is underfunded, we would be liable for a proportionate share of that plan's unfunded vested benefits as required by law. This is called a withdrawal liability.

If we continue to participate in a multiemployer pension plan, the future increases in annual contributions are difficult to predict and largely beyond our control. For example, if any other contributing employer withdraws from a multiemployer plan that is underfunded, and the withdrawing employer cannot satisfy its withdrawal liability, then the proportionate share of the plan's unfunded vested benefits that would be allocable to us and to the other remaining contributing employers would increase.

One of the multiemployer pension plans to which we contribute, the PACE Industry Union-Management Pension Fund, or PIUMPF, was certified to be in "critical status" for the plan year beginning January 1, 2010 and continued to be in critical status through the plan year beginning January 1, 2014. For the plan years beginning January 1, 2015 through

January 1, 2018, PIUMPF was certified to be in "critical and declining status" under the Multiemployer Pension Reform Act of 2014. The number of employers participating in PIUMPF fell from 135 during 2012 to 78 during 2017 and the ratio of inactive participants to active employees participating in PIUMPF has increased from 3.4 inactive participants per each active employee at the end of 2013 to 10.1 inactive participants per each active employee at the end of 2017. PIUMPF predicts it will become insolvent in 2031. We believe we are now the largest contributing employer remaining in PIUMPF. We therefore expect that if we remain in PIUMPF our annual contributions could increase, although we have no way of knowing by how much.

If instead we were to withdraw from PIUMPF, either completely or partially, we would incur a statutory withdrawal liability based on our proportionate share of PIUMPF's unfunded vested benefits. Based on information available to us, as well as information provided by PIUMPF, and reviewed by our actuarial consultant, we estimate that, as of December 31, 2018, the withdrawal liability payments that we would be required to make to PIUMPF were we to completely withdraw in 2019 would be approximately \$5.7 million per year on a pretax basis. These payments would continue for 20 years with an estimated present value in excess of \$78 million on a pre-tax basis. If we were deemed to be included in a "mass withdrawal" from PIUMPF, these payments could continue indefinitely.

Were we voluntarily to withdraw from PIUMPF in 2019 or later, we could be subject to substantial payments in addition to the withdrawal liability payments described above. As a plan in critical and declining status, PIUMPF has adopted a rehabilitation plan. That plan purports to require a withdrawing employer to make an additional, lump-sum payment - above and beyond the statutory withdrawal liability - based on PIUMPF's accumulated funding deficiency, or AFD. We do not believe PIUMPF's purported imposition of the AFD on withdrawing employers is legally enforceable. However, we are aware that one large employer that withdrew from PIUMPF has recognized a liability for payment of an AFD amount and that other withdrawing employers may have paid some amounts in respect to the AFD. There have been and continue to be lawsuits in federal courts challenging PIUMPF's AFD. Some of this litigation has ended without resolving the issue. At least one lawsuit currently pending in the United States District Court for the District of Idaho challenges the legality of the AFD; certain claims made in that suit have been dismissed but the court has allowed the plaintiff to amend its complaint to allege claims that the imposition of the AFD assessment did not constitute a reasonable measure under a rehabilitation plan. There are also efforts underway in the United States Congress intended to address the financial situation of multiemployer plans, like PIUMPF, that are in critical and declining status. It is uncertain whether such efforts will result in new legislation or if any new legislation will affect PIUMPF's financial status.

If the AFD were held to be legally enforceable, and if we were to elect to withdraw in some future year, the amount of our AFD liability at the time of our withdrawal would be material and subject to a variety of factors including without limitation the nature and timing of a withdrawal, the solvency or insolvency of PIUMPF at the time of the withdrawal, the level of contributions to the plan made by other contributing employers before our withdrawal, whether any employers that had withdrawn in the intervening years had made AFD payments, and the effect of any Congressional action to assist the funding of multiemployer plans.

We believe that the AFD, if held to be lawful, would be assessed only if an employer voluntarily withdraws from PIUMPF and that plan insolvency or any other circumstance that does not involve a voluntary withdrawal by us would not require us to make a payment in respect of the AFD. Therefore, since we currently have no plans to withdraw from PIUMPF, we have not recognized any liability associated with a withdrawal from PIUMPF in our consolidated financial statements.

If we were to decide to withdraw voluntarily from PIUMPF in the future, and if the AFD were held to be enforceable against us, the resulting liabilities would have a material adverse effect on our results of operations, financial position, liquidity and cash flows. Similarly, if, in the absence of a voluntary withdrawal by us, our understandings (stated above) are incorrect regarding the unenforceability of the AFD or the inapplicability of the AFD to us in the event of plan insolvency or other circumstances not involving a voluntary withdrawal by us, the resulting liabilities would have a material adverse effect on our results of operations, financial position, liquidity and cash flows.

Adverse changes to, or requirements under, pension laws and regulations or adverse changes, requirements or claims pursuant to PIUMPF's rehabilitation plan, such as the AFD, could increase the likelihood and amount of our liabilities. Were PIUMPF to fail, or were we to withdraw from PIUMPF, these liabilities would be in addition to the pension contributions we would have to make to any new pension plan adopted or contributed to by us to replace PIUMPF. All of this could materially reduce the cash we would have available for business and other needs.

Our company-sponsored pension plans are currently underfunded, and we may be required to make cash payments to the plans, reducing cash available for our business.

We have company-sponsored pension plans covering certain of our salaried and hourly employees. The volatility in the value of equity and fixed income investments held by these plans, coupled with a low interest rate environment resulting in higher liability valuations, has caused these plans to be underfunded as the projected benefit obligation has exceeded the aggregate fair value of plan assets by varying year-end amounts since 2008. At December 31, 2018, and 2017, our company sponsored pension plans were underfunded in the aggregate by \$25.3 million and \$6.8 million, respectively. As a result of underfunding, we may be required to make contributions to our qualified pension plans in future years, which would reduce the cash available for business and other needs. In 2018, we made no contributions to these pension plans, and we are not required to make contributions in 2019.

We are subject to significant environmental regulation and environmental compliance expenditures, which could increase our costs and subject us to liabilities.

We are subject to various federal, state and foreign environmental laws and regulations concerning, among other things, water discharges, air emissions, hazardous material and waste management and environmental cleanup. Environmental laws and regulations continue to evolve and we may become subject to increasingly stringent environmental standards in the future, particularly under air quality and water quality laws and standards related to climate change issues, such as reporting of greenhouse gas emissions. Increased regulatory activity at the state, federal and international level is possible regarding climate change as well as other emerging environmental issues associated with our manufacturing sites, such as water quality standards based on elevated fish consumption rates. Compliance with regulations that implement new public policy in these areas might require significant expenditures on our part or even the curtailment of certain of our manufacturing operations.

We are required to comply with environmental laws and the terms and conditions of multiple environmental permits. In particular, the pulp and paper industry in the United States is subject to several performance based rules associated with effluent and air emissions as a result of certain of its manufacturing processes. Federal, state and local laws and regulations require us to routinely obtain authorizations from and comply with the evolving standards of the appropriate governmental authorities, which have considerable discretion over the terms of permits. Failure to comply with environmental laws and permit requirements could result in civil or criminal fines or penalties or enforcement actions, including regulatory or judicial orders enjoining or curtailing our operations or requiring us to take corrective measures, install pollution control equipment, or take other remedial actions, such as product recalls or labeling changes. We also may be required to make additional expenditures, which could be significant, relating to environmental matters on an ongoing basis. There can be no assurance that future environmental permits will be granted or that we will be able to maintain and renew existing permits, and the failure to do so could have a material adverse effect on our results of operations, financial condition and cash flows.

We own properties, conduct or have conducted operations at properties, and have assumed indemnity obligations for properties or operations where hazardous materials have been or were used for many years, including during periods before careful management of these materials was required or generally believed to be necessary. Consequently, we will continue to be subject to risks under environmental laws that impose liability for historical releases of hazardous substances and to liability for other potential violations of environmental laws or permits at existing sites or ones for which we have indemnity obligations.

Our pension and health care costs are subject to numerous factors that could cause these costs to change.

In addition to our pension plans, we provide health care benefits to certain of our current and former salaried and hourly employees. There is a risk of increased costs due to the Affordable Care Act's individual mandate and required coverage. Our health care costs vary with changes in health care costs generally, which have significantly exceeded general economic inflation rates for many years. Our pension costs are dependent upon numerous factors resulting from actual plan experience and assumptions about future investment returns. Pension plan assets are primarily made up of equity and fixed income investments. Fluctuations in actual equity market returns as well as changes in general interest rates may result in increased pension costs in future periods. Likewise, changes in assumptions regarding current discount rates, expected rates of return on plan assets and mortality rates could also increase pension costs. Significant changes in any of these factors may adversely impact our cash flows, financial condition and results of operations.

We face cyber-security risks.

Our business operations rely upon secure information technology systems for data capture, processing, storage and reporting. Despite careful security and controls design, implementation and updating, our information technology systems could become subject to cyber-attacks. Network, system, application and data breaches could result in operational disruptions or information misappropriation, which could result in lost sales, business delays, negative publicity and could have a material adverse effect on our business, results of operations and financial condition.

We rely on a limited number of third-party suppliers for certain raw materials required for the production of our products.

Our dependence on a limited number of third-party suppliers, and the challenges we may face in obtaining adequate supplies of raw materials, involve several risks, including limited control over pricing, availability, quality, and delivery schedules. We cannot be certain that our current suppliers will continue to provide us with the quantities of these raw materials that we require or will continue to satisfy our anticipated specifications and quality requirements. Any supply interruption in limited raw materials could materially harm our ability to manufacture our products until a new source of supply, if any, could be identified and qualified. Although we believe there are other suppliers of these raw materials, we may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could interrupt production of our products, which would have a material adverse effect on our business.

We May Fail to Attract, Motivate, Train and Retain Qualified Personnel, Including Key Personnel

Our ability to effectively run our business depends on our ability to attract, motivate, train and retain employees with the skills necessary to understand and adapt to the competitive markets in which we operate. The increasing demand for qualified personnel makes it more difficult for us to attract and retain employees with requisite skill sets, particularly employees with specialized technical and trade experience. Changing demographics and labor work force trends also may result in a loss of knowledge and skills as experienced workers retire. If we fail to attract, motivate, train and retain qualified personnel, or if we experience excessive turnover, we may experience declining sales, manufacturing delays or other inefficiencies, increased recruiting, training and relocation costs and other difficulties, and our results of operations, cash flows and financial condition.

In addition, we rely on key executive and management personnel to manage our business efficiently and effectively. The loss of any of our key personnel could adversely affect our results of operations, cash flows and financial condition. Effective succession planning is also important to our long-term success. Our failure to identify candidates with the leadership skills to manage our organization, and our failure to ensure effective transfers of knowledge and smooth transitions involving key executives, could hinder our strategic planning and execution.

Expansion of our business through construction of new facilities or acquisitions may not proceed as anticipated.

In the future, we may build other converting and papermaking facilities, pursue acquisitions of existing facilities, or both. In addition, we may be unable to achieve anticipated benefits or cost savings from construction projects or acquisitions in the timeframe we anticipate, or at all. Any inability by us to integrate and manage any new or acquired facilities or businesses in a timely and efficient manner, any inability to achieve anticipated cost savings or other anticipated benefits from these projects or acquisitions in the time frame we anticipate or any unanticipated required increases in promotional or capital spending could adversely affect our business, financial condition, results of operations or liquidity. Large construction projects or acquisitions can result in a decrease in our cash and short-term investments, an increase in our indebtedness, or both, and also may limit our ability to access additional capital when needed and divert management's attention from other business concerns.

We have identified material weaknesses in our internal control over financial reporting and such weaknesses have led to a conclusion that our disclosure controls and procedures were not effective as of December 31, 2018.

Section 404 of the Sarbanes-Oxley Act of 2002 requires that companies evaluate and report on their systems of internal control over financial reporting. In addition, our independent registered public accounting firm must report on its evaluation of those controls. As disclosed in more detail under "Controls and Procedures" in Part II, Item 9A of this Report, we have identified material weaknesses as of December 31, 2018 in our internal control over financial reporting. Due to these material weaknesses, we have also concluded our disclosure controls and procedures were not effective as of December 31, 2018.

Failure to have effective internal control over financial reporting and ineffectiveness of disclosure controls and procedures could impair our ability to produce accurate financial statements on a timely basis and could lead to a

restatement of our financial statements. If, as a result of deficiencies in our internal control over financial reporting and ineffectiveness of our disclosure controls and procedures, we cannot provide reliable financial statements, our business decision processes may be adversely affected, our business and results of operations could be harmed, investors could lose confidence in our reported financial information and our ability to obtain additional financing, or additional financing on favorable terms, could be adversely affected. In addition, failure to maintain effective internal control over financial reporting could result in investigations or sanctions by regulatory authorities.

If we fail to remediate these material weaknesses and maintain an effective system of disclosure controls or internal control over financial reporting, we may not be able to rely on the integrity of our financial results, which could result in inaccurate or late reporting of our financial results, as well as the inability to meet on a timely basis our reporting obligations or to comply with SEC rules and regulations. Any of these could result in delisting actions by the New York Stock Exchange, investigation and sanctions by regulatory authorities, or an event of default under our debt instruments, and adversely affect our business and the trading price of our common stock.

To service our substantial indebtedness, we must generate significant cash flows. Our ability to generate cash depends on many factors beyond our control.

As of December 31, 2018, we had approximately \$796 million of outstanding indebtedness, and we could incur substantial additional indebtedness in the future. Our ability to make payments on and to refinance our indebtedness, including our outstanding notes, and to fund planned capital expenditures, will depend on our ability to generate cash from our operations. This, to a significant extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We cannot assure you that our business will generate sufficient cash flow from operations or that future borrowings will be available to us under our senior secured revolving credit facilities in an amount sufficient to enable us to pay our indebtedness, including our outstanding notes, or to fund our other liquidity needs. We cannot assure you that we will be able to refinance any of our indebtedness, including our senior secured revolving credit facilities and our outstanding notes, on commercially reasonable terms or at all.

The indenture for our outstanding notes that we issued in 2013 and the credit agreements governing our senior secured revolving credit facilities, contain various covenants that limit our discretion in the operation of our business.

The indenture governing our outstanding notes that we issued in 2013 and the credit agreements governing our senior secured revolving credit facilities, contain various provisions that limit our discretion in the operation of our business by restricting our ability to:

- undergo a change in control;
- sell assets;
- pay dividends and make other distributions;
- make investments and other restricted payments;
- redeem or repurchase our capital stock;
- incur additional debt and issue preferred stock;
- create liens;
- consolidate, merge, or sell substantially all of our assets;
- enter into certain transactions with our affiliates;
- engage in new lines of business; and
- enter into sale and lease-back transactions.

These restrictions on our ability to operate our business at our discretion could seriously harm our business by, among other things, limiting our ability to take advantage of financing, merger and acquisition and other corporate opportunities, or to borrow in order to fund further capital expenditures. In addition, our senior secured revolving credit facilities require, among other things, that we maintain a maximum consolidated secured leverage ratio of 2.00 to 1.00 through December 31, 2019 and of 1.50 to 1.00 from March 31, 2020 and thereafter, a minimum consolidated interest coverage ratio of 1.25 to 1.00, and a minimum consolidated asset coverage ratio of 1.00 to 1.00. Events beyond our control could affect our ability to meet these financial tests, and we cannot assure you that we will meet them.

Our failure to comply with the covenants contained in our senior secured revolving credit facilities or the indentures governing our outstanding notes, including as a result of events beyond our control, could result in an event of default that could cause repayment of the debt to be accelerated.

If we are not able to comply with the covenants and other requirements contained in the indentures governing our outstanding notes, our senior secured revolving credit facilities or our other debt instruments, an event of default under the relevant debt instrument could occur. If an event of default does occur, it could trigger a default under our other

debt instruments, prohibit us from accessing additional borrowings, and permit the holders of the defaulted debt to declare amounts outstanding with respect to that debt to be immediately due and payable. Our assets and cash flow may not be sufficient to fully repay borrowings under our outstanding debt instruments. In addition, we may not be able to refinance or restructure the payments on the applicable debt. Even if we were able to secure additional financing, it may not be available on favorable terms.

Certain provisions of our certificate of incorporation and bylaws and Delaware law may make it difficult for stockholders to change the composition of our Board of Directors and may discourage hostile takeover attempts that some of our stockholders may consider to be beneficial.

Certain provisions of our certificate of incorporation and bylaws and Delaware law may have the effect of delaying or preventing changes in control if our Board of Directors determines that such changes in control are not in the best interests of the company and our stockholders. The provisions in our certificate of incorporation and bylaws include, among other things, the following:

- a classified Board of Directors with three-year staggered terms;
- the ability of our Board of Directors to issue shares of preferred stock and to determine the price and other terms, including preferences and voting rights, of those shares without stockholder approval;
- stockholder action can only be taken at a special or regular meeting and not by written consent;
- advance notice procedures for nominating candidates to our Board of Directors or presenting matters at stockholder meetings;
- removal of directors only for cause;
- allowing only our Board of Directors to fill vacancies on our Board of Directors; and
- supermajority voting requirements to amend our bylaws and certain provisions of our certificate of incorporation.

While these provisions have the effect of encouraging persons seeking to acquire control of the company to negotiate with our Board of Directors, they could enable the Board of Directors to hinder or frustrate a transaction that some, or a majority, of the stockholders might believe to be in their best interests and, in that case, may prevent or discourage attempts to remove and replace incumbent directors. We are also subject to Delaware laws that could have similar effects. One of these laws prohibits us from engaging in a business combination with a significant stockholder unless specific conditions are met.

ITEM 1B.
Unresolved Staff Comments

None.

ITEM 2. Properties

FACILITIES

We own and operate facilities located throughout the United States. The following table lists, as of December 31, 2018, each of our existing facilities and its location, use, and 2018 capacity and production:

	USE	LEASED OR OWNED	CAPACITY ¹	PRODUCTION ¹
CONSUMER PRODUCTS				
Tissue Manufacturing Facilities:				
Las Vegas, Nevada	TAD tissue	Owned	39,000 tons	36,000 tons
Lewiston, Idaho	Tissue	Owned	190,000 tons	187,000 tons
Neenah, Wisconsin	Tissue	Owned	54,000 tons	52,000 tons
Shelby, North Carolina ³	TAD tissue	Owned/Leased	77,000 tons	72,000 tons
			<u>360,000 tons</u>	<u>347,000 tons</u>
Tissue Converting Facilities:				
Elwood, Illinois ²	Tissue converting	Owned/Leased	73,000 tons	66,000 tons
Las Vegas, Nevada	Tissue converting	Owned	64,000 tons	60,000 tons
Lewiston, Idaho	Tissue converting	Owned	90,000 tons	62,000 tons
Neenah, Wisconsin	Tissue converting	Owned	70,000 tons	55,000 tons
Shelby, North Carolina ³	Tissue converting	Owned/Leased	108,000 tons	72,000 tons
			<u>405,000 tons</u>	<u>315,000 tons</u>
PULP AND PAPERBOARD				
Pulp Mills:				
Cypress Bend, Arkansas	Pulp	Owned	314,000 tons	303,000 tons
Lewiston, Idaho	Pulp	Owned	590,000 tons	535,000 tons
			<u>904,000 tons</u>	<u>838,000 tons</u>
Bleached Paperboard Mills:				
Cypress Bend, Arkansas	Paperboard	Owned	360,000 tons	335,000 tons
Lewiston, Idaho	Paperboard	Owned	480,000 tons	475,000 tons
			<u>840,000 tons</u>	<u>810,000 tons</u>
Sheeted Paperboard Facilities:				
Mendon, Michigan ²	Paperboard sheeting	Owned/Leased	50,000 tons	36,000 tons
Wilkes-Barre, Pennsylvania ²	Paperboard sheeting	Owned/Leased	40,000 tons	23,000 tons
Dallas, Texas ²	Paperboard sheeting	Owned/Leased	36,000 tons	16,000 tons
Richmond, Virginia ²	Paperboard sheeting	Owned/Leased	35,000 tons	20,000 tons
Hagerstown, Indiana ²	Paperboard sheeting	Owned/Leased	32,000 tons	26,000 tons
			<u>193,000 tons</u>	<u>121,000 tons</u>
Columbia City, Oregon	Chip shipment	Leased	N/A	N/A
Clarkston, Washington	Wood chipping	Owned	N/A	N/A
CORPORATE				
Alpharetta, Georgia	Operations and administration	Leased	N/A	N/A
Spokane, Washington	Corporate headquarters	Leased	N/A	N/A

¹ Production amounts are approximations for full year 2018 and capacity amounts represent permitted capacities as of December 31, 2018. Annual capacity is an estimate based on assumptions and judgments concerning, among other things, both market demand and product mix, which change from time-to-time.

² The buildings located at these facilities are leased by Clearwater Paper or a wholly-owned subsidiary, and the operating equipment located within the buildings are owned by Clearwater Paper or a wholly-owned subsidiary.

³ Some of the buildings located at the Shelby, North Carolina facility are leased by Clearwater Paper or a wholly-owned subsidiary, some buildings are owned, and the operating equipment located within the buildings is owned by Clearwater Paper or a wholly-owned subsidiary.

ITEM 3.

Legal Proceedings

We may from time to time be involved in claims, proceedings and litigation arising from our business and property ownership. We believe, based on currently available information, that the results of such proceedings, in the aggregate, will not have a material adverse effect on our financial condition, results of operations and cash flows.

ITEM 4.

Mine Safety Disclosures

Not applicable.

Part II

ITEM 5.

Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

MARKET FOR OUR COMMON STOCK

Our common stock is traded on the New York Stock Exchange under the symbol "CLW."

HOLDERS

On March 11, 2019, the last reported sale price for our common stock on the New York Stock Exchange was \$26.74 per share. As of March 11, 2019, there were approximately 740 registered holders of our common stock.

ISSUER PURCHASES OF EQUITY SECURITIES

Please see Part II, Note 2, "Summary of Significant Accounting Policies" of this report for information relating to our purchases of equity securities.

ITEM 6.

Selected Financial Data

All of the data listed below has been derived from our audited financial statements. Our historical financial and other data is not necessarily indicative of our future performance. Amounts for 2014 forward reflect the sale of our specialty business and mills on December 30, 2014.

(In thousands, except net earnings (loss) per share amounts)	2018	2017	2016	2015	2014
Net sales	\$ 1,724,218	\$ 1,730,408	\$ 1,734,763	\$ 1,752,401	\$ 1,967,139
(Loss) income from operations ¹	(97,909)	71,185	114,764	123,670	79,811
Net (loss) earnings ^{1,2}	(143,767)	97,339	49,554	55,983	(2,315)
Working capital ³	(5,348)	33,537	79,975	199,010	302,069
Long-term debt, net of current portion	671,292	570,524	569,755	568,987	568,221
Stockholders' equity	426,396	575,434	469,873	474,866	497,537
Capital expenditures	337,950	198,685	155,677	134,104	99,600
Property, plant and equipment, net	1,269,271	1,050,982	945,328	866,538	810,987
Total assets	1,788,118	1,802,252	1,684,342	1,527,369	1,579,149
Net (loss) earnings per basic common share	\$ (8.72)	\$ 5.91	\$ 2.91	\$ 2.98	\$ (0.11)
Average basic common shares outstanding	16,487	16,464	17,001	18,762	20,130
Net earnings (loss) per diluted common share ¹	\$ (8.72)	\$ 5.88	\$ 2.90	\$ 2.97	\$ (0.11)
Average diluted common shares outstanding	16,487	16,556	17,106	18,820	20,130

¹ Loss from operations and net loss for the twelve months ended December 31, 2018 includes a non-cash goodwill impairment charge associated with our Consumer Products segment of \$195.1 million. For additional information, refer to Note 7 "Goodwill and Intangible Assets."

² Net earnings and net earnings per basic and diluted common share for the twelve months ended December 31, 2017 reflect a \$70 million tax benefit resulting from the remeasurement of the company's net deferred tax liabilities following passage of the Tax Cuts and Jobs Act signed into law on December 22, 2017.

³ Working capital is defined as our current assets less our current liabilities, as presented on our Consolidated Balance Sheets.

ITEM 7.

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements and notes thereto that appear elsewhere in this report. This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. Actual results may differ materially from those discussed in these forward-looking statements due to a number of factors, including those set forth in the section entitled "Risk Factors" and elsewhere in this report.

Unless the context otherwise requires or unless otherwise indicates, references in this report to "Clearwater Paper Corporation," "we," "our," "the company" and "us" refer to Clearwater Paper Corporation and its subsidiaries.

OVERVIEW

Recent Events

Asset Divestiture

On August 21, 2018, we sold our Ladysmith, Wisconsin manufacturing facility for net cash proceeds of approximately \$71 million and recorded a related gain on divested assets of \$24.0 million. Among other offsets, the net gain on divested assets includes \$34.0 million of assets sold and a \$14.0 million goodwill write-off.

Shelby Expansion Project

We are nearing completion of building a new tissue machine and related converting equipment at a site adjacent to our existing facility in Shelby, North Carolina. The new tissue machine will produce a variety of high-quality private label ultra and premium bath, paper towel and napkin products. At full production capacity, the new tissue machine is expected to produce approximately 70,000 tons of tissue products annually. The estimated cost for the project includes approximately \$360 million for the tissue machine, converting equipment and buildings, and approximately \$60 million for warehouse expansion that will consolidate all southeastern warehousing in Shelby. The total estimated cost of the project has increased by approximately \$80 million from our original estimates due to the combination of external and internal factors, including acceleration of the startup of our converting operation in Shelby to help improve the Consumer Products segment's operating model by lowering transportation costs. The external and internal factors include a very tight construction labor market, additional engineering requirements, weather-related delays and significantly higher material costs, including steel costs that were exacerbated by tariffs first imposed in 2018. To partially offset the increased cost for the Shelby expansion, we elected to reduce approximately \$30 million in other capital expenditures originally forecasted for 2018.

We project that the construction of the new facility will be completed in early 2019 and will be fully operational in 2020. As of December 31, 2018, we have incurred a total of \$371.8 million on construction related activities and the new tissue machine in Shelby, of which \$295.7 million was incurred in 2018. We also capitalized \$8.9 million of interest as of December 31, 2018, related to the Shelby expansion, of which \$7.7 million was incurred in 2018.

Selling, General and Administrative Cost Structure Changes

In the second half of 2017, we examined our selling, general and administrative, or SG&A, cost structure as part of our effort to maintain our longer-term competitiveness. As a result of this review, in the fourth quarter of 2017 we began executing on a plan that is expected to result in lower SG&A expenses beginning in 2018. In 2018, we incurred \$6.9 million of expenses associated with these efforts, which consisted primarily of severance and professional services expenses. As of December 31, 2018, we had achieved approximately \$13 million in cost reductions, compared to 2017 SG&A expenses, as a result of these changes.

Goodwill Impairment

We conducted our annual impairment test as of the November 1, 2018 measurement date and concluded, in connection with the preparation of our 2018 financial statements, that the estimated fair value of the Consumer Products reporting unit was below the carrying value of the reporting unit, resulting in a non-cash impairment charge of \$195.1 million. This amount represents the remaining goodwill associated with our Consumer Products reporting unit that was originally recorded as the result of our acquisition of Cellu Tissue Holdings, Inc. in 2010.

Developments and Trends in our Business

Net Sales

Prices for our consumer tissue products are affected by competitive conditions and the prices of branded tissue products. Tissue has historically been one of the strongest segments of the paper and forest products industry due to its steady demand growth. Our Consumer Products segment competes based on product quality, customer service and price. We deliver customer-focused business solutions by assisting in managing product assortment, category management, and pricing and promotion optimization.

In recent years, the industry has seen an increase in premium and ultra tissue products as industry participants have added or improved through-air-dried, or TAD, or equivalent production capacity as well as added conventional tissue capacity. Demand and pricing for consumer tissue products is currently being affected by the increased capacity, as well as changing dynamics in the at-home tissue segment as a result of changing consumer purchasing habits, consolidations and new entrants in the consumer retail channel, and new and evolving sales and distribution channels. These changing conditions contributed to a very competitive environment for consumer tissue in 2018, and we expect these conditions to continue in 2019. Reflecting these increasingly competitive conditions, in the third quarter of 2017, our largest tissue customer made the decision to go from a single source model to a multisource model for its private label tissue supply beginning in the first quarter of 2018. This significantly affected sales volumes for our conventional tissue in 2018.

Our pulp and paperboard business is affected by macro-economic conditions around the world and has historically experienced cyclical market conditions. As a result, historical prices for our products and sales volumes have been volatile. Product pricing is significantly affected by the relationship between supply and demand for our products. Product supply in the industry is influenced primarily by fluctuations in available manufacturing production, which tends to increase during periods when prices remain strong. In addition, currency exchange rates affect U.S. supplies of paperboard, as non-U.S. manufacturers are more attracted to the U.S. market when the dollar is relatively strong. Paperboard pricing increased in 2018 compared to 2017.

The markets for our products are highly competitive. Our business is capital intensive, which leads to high fixed costs and large capital outlays and generally results in continued production as long as prices are sufficient to cover variable costs. These conditions have contributed to substantial price competition, particularly during periods of reduced demand. Some of our competitors have lower production costs, greater buying power and are integrated, and, as a result, may be less adversely affected than we are by price decreases.

Net sales consist of sales of consumer tissue, paperboard, and to a lesser extent pulp, net of discounts, returns and allowances and any sales taxes collected.

Operating Costs

Prices for our principal operating cost items are variable and directly affect our results of operations. In a strong economy, we normally would expect at least some upward pressure on our operating costs. Competitive market conditions, however, can limit our ability to pass cost increases through to our customers. The following table shows our principal operating cost items and associated percentage of net sales for each of the past three years:

(Dollars in thousands)	Years Ended December 31,					
	2018		2017		2016	
	Cost ³	Percentage of Net Sales	Cost ³	Percentage of Net Sales	Cost	Percentage of Net Sales
Wages and benefits ⁴	\$ 283,138	16.4%	\$ 278,622	16.1%	\$ 295,209	17.1%
Transportation ¹	204,848	11.9	200,177	11.6	182,145	10.5
Purchased pulp	187,790	10.9	193,358	11.2	196,848	11.3
Chemicals	173,082	10.0	165,328	9.5	166,954	9.6
Chips, sawdust and logs	165,305	9.6	135,802	7.8	148,583	8.6
Depreciation	87,723	5.1	91,312	5.3	80,652	4.6
Packaging supplies	86,668	5.0	88,245	5.1	86,273	5.0
Energy	84,035	4.9	87,287	5.0	87,163	5.0
Maintenance and repairs ²	71,786	4.2	88,221	5.1	95,800	5.5
	1,344,375	78.0	1,328,352	76.7	1,339,627	77.2
Other operating costs	193,637	11.2	201,989	11.7	153,932	8.9
Total cost of sales ⁴	\$1,538,012	89.2%	\$1,530,341	88.4%	\$1,493,559	86.1%

¹ Includes internal and external transportation costs.

² Excluding related labor costs.

³ Costs for Manchester operations, which we acquired in December 16, 2016, are included from that acquisition date forward.

⁴ In 2018, we adopted a new accounting standard, ASU 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Costs, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts have been reclassified to conform with the current period presentation.

Wages and benefits. Costs related to our employees primarily consist of wages and related benefit costs and payroll taxes. Wage and benefit costs for 2018 increased compared to 2017 primarily due to severance related costs associated with our SG&A cost structure changes and the impact of annual wage increases, in addition to costs for hiring and training new employees for the Shelby expansion project.

Transportation. Fuel prices, mileage driven and line-haul rates largely impact transportation costs for the delivery of raw materials to our manufacturing facilities, internal inventory transfers and delivery of our finished products to customers. Changing fuel prices particularly affect our margins for consumer products because we supply customers throughout the U.S. and transport unconverted parent rolls from our tissue mills to our tissue converting facilities. Our transportation costs for 2018 increased compared to 2017 due primarily to increased paperboard shipments and higher line haul rates on both internal and external shipments.

Purchased pulp. We purchase a significant amount of the pulp needed to manufacture our consumer products, and to a lesser extent our paperboard, from external suppliers. For 2018, although pulp prices remained high, our total purchased pulp costs decreased compared to 2017, due primarily to no planned major maintenance outages at our pulp and paperboard facilities in 2018 and lower tissue shipments in our Consumer Products segment.

Chemicals. We consume a substantial amount of chemicals in the production of pulp and paperboard, as well as in the production of TAD tissue. The chemicals we generally use include polyethylene, caustic, starch, sodium chlorate, latex and paper processing chemicals. A portion of the chemicals used in our manufacturing processes, particularly in the paperboard extrusion process, are petroleum-based and are impacted by petroleum prices. In 2018, our chemical costs increased compared to 2017 due to higher prices and higher paperboard production.

Chips, sawdust and logs. We purchase chips, sawdust and logs that we use to manufacture pulp. We source residual wood fibers under both long-term and short-term supply agreements, as well as in the spot market. Chips, sawdust

and log costs increased in 2018 compared to 2017 due to increased paperboard production and higher prices for these materials at both of our pulp and paperboard locations.

Depreciation. We record substantially all of our depreciation expense associated with our plant and equipment in "Cost of Sales" on our Consolidated Statements of Operations. Depreciation expense for 2018 decreased compared to 2017, primarily due to accelerating depreciation in 2017 on certain Oklahoma City assets in connection with the March 2017 closure of this facility, partially offset by increased depreciation as a result of higher capital spending.

Packaging supplies. As a significant producer of private label consumer tissue products, we package to order for retail chains, wholesalers and cooperative buying organizations. Under our agreements with those customers, we are responsible for the expenses related to the unique packaging of our products for direct retail sale to their consumers. For 2018, packaging costs decreased compared to 2017, primarily due to reduced tissue finished good case shipments, which were partially offset by higher pricing for packaging materials.

Energy. We use energy in the form of electricity, hog fuel, steam and natural gas to operate our mills. Energy prices may fluctuate widely from period-to-period due primarily to volatility in weather and electricity and natural gas rates. We generally strive to reduce our exposure to volatile energy prices through conservation. In addition, a cogeneration facility that produces steam and electricity and the recently installed continuous digester at our Lewiston, Idaho manufacturing site helps to lower our energy costs.

Energy costs for 2018 decreased compared to 2017 due to favorable natural gas and electricity prices in our pulp and paperboard segment, as well as lower natural gas usage at our Idaho pulp and paperboard facility.

To help mitigate our exposure to changes in natural gas prices, we use firm-price contracts to supply a portion of our natural gas requirements. As of December 31, 2018, these contracts covered approximately 14% of our expected average monthly natural gas requirements for 2019, which includes approximately 12% of the expected average monthly requirements for the first quarter of 2019. Our energy costs in future periods will depend principally on our ability to produce a substantial portion of our electricity needs internally, on changes in market prices for natural gas and on our ability to reduce our energy usage through conservation.

Maintenance and repairs. We regularly incur significant costs to maintain our manufacturing equipment. We perform routine maintenance on our machines and periodically replace a variety of parts such as motors, pumps, pipes and electrical parts.

Major equipment maintenance and repairs in our Pulp and Paperboard segment also require maintenance shutdowns approximately every 18 to 24 months at both our Idaho and Arkansas facilities, which increase costs and may reduce net sales in the quarters in which the major maintenance shutdowns occur. In 2018, maintenance costs decreased compared to 2017, due to no planned major maintenance at our pulp and paperboard facilities in 2018. In 2019, we expect to have shutdowns for major maintenance at our Idaho facility in the third quarter and at our Arkansas facility in the fourth quarter.

Other. Other costs consist of miscellaneous operating costs, which decreased for the year ended December 31, 2018 compared to 2017 primarily due to lower costs for temporary employees, operating supplies, property taxes and purchased paper. These decreases were partially offset by a lower amount of insurance recoveries in 2018, compared to 2017, which included claim settlements for fires at our Las Vegas and Shelby facilities.

Selling, general and administrative expenses

Selling, general and administrative expenses primarily consist of compensation and associated expenses for sales and administrative personnel, as well as commission expenses related to sales of our products.

Interest expense

Interest expense is comprised of interest on our \$275 million aggregate principal amount of 4.5% senior notes issued January 2013 and due 2023, which we refer to as the 2013 Notes, and interest on our \$300 million aggregate principal amount of 5.375% senior notes issued in 2014 and due in 2025, which we refer to as the 2014 notes. Interest expense also includes interest on the amount drawn under our revolving credit facilities and amortization of deferred issuance costs associated with all of our notes and revolving credit facilities. These interest expense amounts are partially offset by capitalized interest associated with major capital project spending.

Income taxes

Income taxes are based on reported earnings and tax rates in jurisdictions in which our operations occur and offices are located, adjusted for available credits, changes in valuation allowances and differences between reported earnings and taxable income using current tax laws and rates.

The following table details our tax provision and effective tax rates for the years ended December 31, 2018, 2017 and 2016:

(Dollars in thousands)	2018	2017	2016
Income tax provision (benefit)	\$ 10,305	\$ (56,385)	\$ 31,112
Effective tax rate	7.7%	(137.7)%	38.6%

The rate for 2018 includes a \$10.0 million benefit from Federal tax credits for alternative energy production related to our Lewiston pulp optimization project. The benefit for 2017 was primarily driven by a \$70 million tax benefit resulting from the remeasurement of our net deferred tax liabilities following passage of the Tax Cuts and Jobs Act in December 2017.

The estimated annual effective tax rate for 2019 is expected to be approximately 25%.

RESULTS OF OPERATIONS

Our business is organized into two reporting segments: Consumer Products and Pulp and Paperboard. Intersegment costs for pulp transferred from our Pulp and Paperboard segment to our Consumer Products segment are recorded at cost, and thus no intersegment sales or cost of sales for these transfers are included in our segments' results. Our financial and other data are not necessarily indicative of our future performance.

YEAR ENDED DECEMBER 31, 2018 COMPARED TO YEAR ENDED DECEMBER 31, 2017

The following table sets forth data included in our Consolidated Statements of Operations as a percentage of net sales.

(Dollars in thousands)	Years Ended December 31,			
	2018		2017	
Net sales	\$ 1,724,218	100.0%	\$ 1,730,408	100.0%
Costs and expenses:				
Cost of sales ¹	(1,538,012)	89.2	(1,530,341)	88.4
Selling, general and administrative expenses ¹	(112,988)	6.6	(128,882)	7.4
Goodwill impairment	(195,079)	11.3	—	—
Gain on divested assets, net	23,952	1.4	—	—
Total operating costs and expenses	(1,822,127)	105.7	(1,659,223)	95.9
(Loss) income from operations	(97,909)	5.7	71,185	4.1
Interest expense, net	(30,620)	1.7	(31,374)	1.8
Non-operating pension and other postretirement benefit (costs) income ¹	(4,933)	0.3	1,143	0.1
(Loss) earnings before income taxes	(133,462)	7.7	40,954	2.4
Income tax (provision) benefit	(10,305)	0.6	56,385	3.3
Net (loss) earnings	\$ (143,767)	8.3%	\$ 97,339	5.6%

¹ In 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts have been reclassified to conform with the current period presentation.

Net sales—Net sales for 2018 decreased by \$6.2 million, or less than 1.0%, compared to 2017, primarily due to the August 2018 sale of our Ladysmith facility, as well as decreased shipments and a lower average selling price during 2018 in our Consumer Products segment, partially offset by increased shipments and a favorable sales mix in our Pulp and Paperboard segment.

Cost of sales—Cost of sales was 89.2% of net sales for 2018 compared to 88.4% of net sales for 2017. Cost of sales was \$7.7 million higher in 2018 due primarily to increased costs for wood fiber, chemicals, transportation and wages and benefits. These cost increases were partially offset by lower maintenance, energy and packaging costs, as well as lower depreciation expense.

Selling, general and administrative expenses—Selling, general and administrative expenses decreased \$15.9 million during 2018 compared to 2017. The decrease was due in part to lower commission and marketing expense, reduced travel expenses and lower profit dependent accruals, which were partially offset by higher severance and professional services expenses related to cost structure changes. Selling, general and administrative expenses for 2017 included \$4.3 million of asset write-downs to held for sale value on certain assets at our former Oklahoma City facility and \$3.2 million of expenses associated with the execution of a sublease for the Oklahoma City facility.

Goodwill impairment—In the fourth quarter of 2018, we recorded a non-cash goodwill impairment charge associated with our Consumer Products segment of \$195.1 million. See Item 8, Financial Statements and Supplementary Data under Note 7 "Goodwill and Intangible Assets" and "Critical Accounting Policies and Estimates - Goodwill" included on page 40 for further information.

Gain on divested assets, net—On August 21, 2018, we sold our Ladysmith facility for net cash proceeds of approximately \$71 million. In total, \$24.0 million of gain was recorded on the sale, which included \$34.0 million of net assets sold, \$14.0 million of goodwill write-off and other expenses related to the sale.

Interest expense—Interest expense decreased \$0.8 million during 2018, compared to 2017 as higher interest expense associated with a larger average balance on our revolving credit facilities was more than offset by higher capitalized interest of \$9.0 million in 2018 compared to capitalized interest of \$4.6 million in 2017.

Income tax provision—We recorded income tax expense of \$10.3 million in 2018, compared to an income tax benefit of \$56.4 million in 2017. The rate determined under generally accepted accounting principles, or GAAP, for 2018 was a provision of approximately 8% compared to a benefit in 2017 of approximately 138%. The net change to our effective tax rate in 2018 was primarily the result of recognizing benefits related to tax reform in 2017 and current year goodwill impairment expense which did not have a corresponding tax impact.

During 2018 and 2017, there were a number of items that were included in the calculation of our income tax provision that we do not believe were indicative of our core operating performance. Excluding these items, the tax rates for 2018 and 2017 would have been approximately 5% and 34%, respectively. See the section entitled "Non-GAAP Measures" on pages 34-36 of this report for a reconciliation of these adjusted income tax benefit and provision amounts to the comparable income tax provision amounts.

DISCUSSION OF BUSINESS SEGMENTS

Consumer Products

(Dollars in thousands - except per ton amounts)	Years Ended December 31,	
	2018	2017
Net sales	\$ 884,812	\$ 941,907
Operating (loss) income ¹	(173,858)	28,973
Percent of net sales	(19.6)%	3.1%
Shipments (short tons)		
Retail	293,856	309,067
Non-retail	58,577	55,562
Total tissue tons	352,433	364,629
Converted products cases (in thousands)	48,699	51,221
Sales price (per short ton)		
Retail	\$ 2,703	\$ 2,775
Non-retail	1,506	1,440
Total tissue	\$ 2,504	\$ 2,572

¹ In 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts have been reclassified to conform with the current period presentation.

Net sales for our Consumer Products segment decreased by \$57.1 million, or 6.1%, in 2018 compared to 2017, due to the sale of our Ladysmith facility in the third quarter of 2018, lower average retail tissue net selling prices and decreased converted case shipments. These unfavorable comparisons were partially offset by higher average net selling prices and increased shipments for non-retail tissue products.

The segment had an operating loss of \$173.9 million in 2018, which included the \$195.1 million non-cash goodwill impairment charge and a gain of \$24.0 million on the sale of the Ladysmith facility. Excluding the goodwill impairment charge and the gain on the sale of the Ladysmith facility, the segment had an operating loss of \$2.8 million compared to operating income of \$29.0 million in 2017. The loss was due primarily to the decreased sales, higher pulp and transportation costs, as well as higher wage and benefit costs associated with an increase in employees related to the expansion of our Shelby facility project and the effect of annual wage increases. Operating income for 2017 also included \$14.7 million of costs associated with the closure of our former Oklahoma City facility, which included expenses associated with the execution of a sublease for that facility.

Pulp and Paperboard

(Dollars in thousands - except per ton amounts)	Years Ended December 31,	
	2018	2017
Net sales	\$ 839,406	\$ 788,501
Operating income ¹	130,426	97,360
Percent of net sales	15.5%	12.3%
Paperboard shipments (short tons)	859,348	828,201
Paperboard sales price (per short ton)	\$ 975	\$ 952

¹ In 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts have been reclassified to conform with the current period presentation.

Net sales for our Pulp and Paperboard segment increased by \$50.9 million, or 6.5%, in 2018 compared to 2017. The increase was due primarily to strong production and sales volume increases in addition to paperboard net price increases.

Operating income for the segment increased \$33.1 million, or 34.0%, during 2018 compared to 2017, due primarily to increased sales and lower maintenance costs due to no planned major maintenance in 2018. These favorable impacts were partially offset by higher chip, sawdust and log costs, as well as higher chemical and transportation costs and increased depreciation expense.

YEAR ENDED DECEMBER 31, 2017 COMPARED TO YEAR ENDED DECEMBER 31, 2016

The following table sets forth data included in our Consolidated Statements of Operations as a percentage of net sales.

(Dollars in thousands)	Years Ended December 31,			
	2017		2016	
Net sales	\$ 1,730,408	100.0%	\$ 1,734,763	100.0%
Costs and expenses:				
Cost of sales ¹	(1,530,341)	88.4	(1,493,559)	86.1
Selling, general and administrative expenses ¹	(128,882)	7.4	(128,195)	7.4
Gain on divested assets, net	—	—	1,755	0.1
Total operating costs and expenses	(1,659,223)	95.9	(1,619,999)	93.4
Income from operations	71,185	4.1	114,764	6.6
Interest expense, net	(31,374)	1.8	(30,651)	1.8
Non-operating pension and other postretirement benefit (costs) income ¹	1,143	0.1	(3,447)	0.2
Earnings before income taxes	40,954	2.4	80,666	4.6
Income tax benefit (provision)	56,385	3.3	(31,112)	1.8
Net earnings	\$ 97,339	5.6%	\$ 49,554	2.9%

¹ In the first quarter of 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts above have been reclassified to conform with the 2018 presentation.

Net sales—Net sales for 2017 decreased by \$4.4 million, or less than 1.0%, compared to 2016, primarily due to decreased shipments during 2017 in our Consumer Products segment largely offset by increased shipments in our Pulp and Paperboard segment, as a result of the inclusion of Manchester Industries, which was acquired in December 2016, and a favorable sales mix in both segments. These items are further discussed below under "Discussion of Business Segments."

Cost of sales—Cost of sales was 88.4% of net sales for 2017 compared to 86.1% of net sales for 2016. Cost of sales was \$36.8 million higher in 2017 due primarily to increased transportation costs caused by major weather related events, additional internal case shipments as a result of the closure of our Oklahoma City facility, and higher transportation rates. Furthermore, this increase in cost of sales was impacted by higher pulp pricing, higher depreciation expense, higher costs associated with the inclusion of Manchester Industries, and higher inventory costs in the fourth quarter of 2016 that flowed through cost of sales in first quarter of 2017. These cost increases were partially offset by lower wage and benefit costs resulting from the implementation of our warehouse automation project at several of our Consumer Products segment facilities, the shutdown of two paper machines at our Neenah facility in the fourth quarter of 2016 and the closure of our Oklahoma City facility in March 2017.

Selling, general and administrative expenses—Selling, general and administrative expenses increased \$0.7 million during 2017 compared to 2016. The higher expense was primarily a result of \$4.3 million of asset write-downs to their held for sale value on certain Oklahoma City assets, \$3.2 million of expenses associated with the execution of a sublease for the Oklahoma City facility, \$3.0 million of increased amortization of intangibles resulting from our acquisition of Manchester Industries and \$2.3 million of reorganization related expenses associated with cost control measures. These cost increases were partially offset by \$2.8 million of mark-to-market benefit in 2017 related to our directors' common stock units, which will ultimately be settled in cash, compared to \$4.8 million of mark-to-market expense in 2016, lower profit dependent accruals, and a \$1.6 million pension settlement charge in 2016.

Gain on divested assets—During 2016, we recognized a net gain of \$1.8 million as a result of the release to us of \$2.3 million from an indemnity escrow account related to the December 2014 sale of our former specialty business and mills, less \$0.5 million of other related settlement costs.

Interest expense—Interest expense increased \$0.7 million during 2017, compared to 2016. The increase was driven by a larger average balance on our revolving credit facilities during 2017 compared to 2016, partially offset by capitalized interest of \$4.6 million in 2017 compared to \$2.3 million in 2016.

Income tax provision—We recorded an income tax benefit of \$56.4 million in 2017, compared to income tax expense of \$31.1 million in 2016. The benefit in 2017 was primarily the result of a \$70 million tax benefit resulting from the remeasurement of our net deferred tax liabilities following the passage of the Tax Cuts and Jobs Act. During 2017 and 2016, there were a number of items that were included in the calculation of our income tax benefit and expense that we do not believe were indicative of our core operating performance. Excluding these items, the tax rates for 2017 and 2016 would have been approximately 34% and 38%, respectively. See the section entitled "Non-GAAP Measures" on pages 34-36 of this report for a reconciliation of these adjusted income tax benefit and provision amounts to the comparable income tax provision amounts.

DISCUSSION OF BUSINESS SEGMENTS

Consumer Products

(Dollars in thousands - except per ton amounts)	Years Ended December 31,	
	2017	2016
Net sales	\$ 941,907	\$ 988,380
Operating income ¹	28,973	67,919
Percent of net sales	3.1%	6.9%
Shipments (short tons)		
Retail	309,067	314,042
Non-retail	55,562	81,952
Total tissue tons	364,629	395,994
Converted products cases (in thousands)	51,221	52,875
Sales price (per short ton)		
Retail	\$ 2,775	\$ 2,757
Non-retail	1,440	1,480
Total tissue	\$ 2,572	\$ 2,493

¹ In 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts above have been reclassified to conform with the 2018 presentation.

Net sales for our Consumer Products segment decreased by \$46.5 million, or 4.7%, in 2017 compared to 2016, due to lower overall sales volume in both finished goods cases and parent rolls. The decreased parent roll sales were primarily the result of the shutdown of two paper machines at our Neenah facility in the fourth quarter of 2016. This decrease in volume was partially offset by a favorable sales mix as increased TAD bathroom tissue and household towel sales, combined with reduced parent roll sales, resulted in a 3.2% average price increase.

Segment operating income decreased \$38.9 million, or 57.3%, in 2017 compared to 2016 due primarily to increased costs for transportation, pulp and packaging, higher depreciation expense, costs associated with the closure of our Oklahoma City facility, and higher inventory costs in the fourth quarter of 2016 that flowed through cost of sales in the first quarter of 2017. These cost increases were partially offset by reduced wage and benefit costs resulting from the implementation of our warehouse automation project, the shutdown of the two paper machines at our Neenah facility in the fourth quarter 2016 and the closure of our Oklahoma City facility in the first quarter of 2017, which also resulted in favorable maintenance cost comparisons in 2017.

Pulp and Paperboard

(Dollars in thousands - except per ton amounts)	Years Ended December 31,	
	2017	2016
Net sales	\$ 788,501	\$ 746,383
Operating income ¹	97,360	112,700
Percent of net sales	12.3%	15.1%
Paperboard shipments (short tons)	828,201	796,158
Paperboard sales price (per short ton)	\$ 952	\$ 937

¹ In 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts have been reclassified to conform with the current period presentation.

Net sales for our Pulp and Paperboard segment increased by \$42.1 million, or 5.6%, in 2017 compared to 2016. The increase was primarily due to the inclusion of Manchester and incremental volumes with a higher net selling price resulting from a favorable sales mix.

Operating income for the segment decreased \$15.3 million, or 13.6%, during 2017 compared to 2016, due primarily to increased costs for purchased pulp, higher natural gas prices and increased electrical usage due to extended turbine generator outages at our Arkansas and Idaho facilities. Additionally, depreciation and amortization costs increased as a result of the acquisition of Manchester Industries and the installation of the continuous pulp digester at our Idaho facility. These cost increases were partially offset by improved pulp yields and reduced wood fiber prices at our Arkansas facility.

NON-GAAP MEASURES

We use earnings before interest (including debt retirement costs), taxes, depreciation and amortization, or EBITDA, and EBITDA adjusted for certain items, or Adjusted EBITDA, and Adjusted income tax provision as supplemental performance measures that are not required by, or presented in accordance with GAAP. EBITDA and Adjusted EBITDA should not be considered as alternatives to net earnings, operating income or any other performance measure derived in accordance with GAAP, or as alternatives to cash flows from operating activities or a measure of our liquidity or profitability. In addition, our calculation of EBITDA and Adjusted EBITDA may or may not be comparable to similarly titled measures used by other companies.

EBITDA and Adjusted EBITDA have important limitations as analytical tools, and should not be considered in isolation, or as a substitute for any of our results as reported under GAAP. Some of these limitations are:

- EBITDA and Adjusted EBITDA do not reflect our cash expenditures for capital assets;
- EBITDA and Adjusted EBITDA do not reflect changes in, or cash requirements for, our working capital requirements;
- EBITDA and Adjusted EBITDA do not include cash pension payments;
- EBITDA and Adjusted EBITDA exclude certain tax payments that may represent a reduction in cash available to us;
- EBITDA and Adjusted EBITDA do not reflect interest expense, or the cash requirements necessary to service interest or principal payments on our debt;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future, and EBITDA and Adjusted EBITDA do not reflect cash requirements for such replacements; and
- other companies, including other companies in our industry, may calculate these measures differently than we do, limiting their usefulness as a comparative measure.

We present EBITDA, Adjusted EBITDA and Adjusted income tax provisions because we believe they assist investors and analysts in comparing our performance across reporting periods on a consistent basis by excluding items that we do not believe are indicative of our core operating performance. In addition, we use EBITDA and Adjusted EBITDA: (i) as factors in evaluating management's performance when determining incentive compensation, (ii) to evaluate the effectiveness of our business strategies, and (iii) because our credit agreement and the indenture governing the 2013 Notes uses metrics similar to EBITDA to measure our compliance with certain covenants.

The following table provides our EBITDA and Adjusted EBITDA for the periods presented, as well as a reconciliation to net earnings:

(In thousands)	Years Ended December 31,		
	2018	2017	2016
Net (loss) earnings	\$ (143,767)	\$ 97,339	\$ 49,554
Interest expense, net ¹	30,620	31,374	30,651
Income tax provision (benefit)	10,305	(56,385)	31,112
Depreciation and amortization expense ²	101,953	104,990	91,090
EBITDA	\$ (889)	\$ 177,318	\$ 202,407
Directors' equity-based compensation (benefit) expense	(2,340)	(2,833)	4,779
Goodwill impairment ³	195,079	—	—
Gain associated with the sale of the Ladysmith facility, net	(23,952)	—	—
Reorganization related expenses associated with SG&A cost control measures	6,935	2,263	—
Consumer products reorganization related expenses	1,048	—	—
Other	844	—	—
Costs associated with Oklahoma City facility closure ⁴	—	11,055	318
Costs associated with Long Island facility closure	—	1,443	1,891
Manchester Industries acquisition related expenses	—	220	2,665
Write-off of assets as a result of Warehouse Automation project	—	41	—
Gain associated with the sale of the specialty mills, net	—	—	(1,755)
Pension settlement expense	—	—	3,482
Costs associated with Neenah paper machines shutdown	—	—	1,049
Adjusted EBITDA	\$ 176,725	\$ 189,507	\$ 214,836

¹ Interest expense, net for the year ended December 31, 2016 includes debt retirement costs of \$0.4 million.

² Depreciation and amortization expense for the years ended December 31, 2017 and 2016 includes \$3.7 million and \$1.3 million, respectively, of accelerated depreciation associated with the Oklahoma City facility closure.

³ During the fourth quarter of 2018, we recognized non-cash goodwill impairment of \$195.1 million associated with our Consumer Products segment. See Item 8, Financial Statements and Supplementary Data under Note 7 "Goodwill and Intangibles Assets" for more information.

⁴ Costs associated with the Oklahoma City facility closure for the twelve months ended December 31, 2017 include \$4.3 million of loss on the write-down of assets to their held for sale value and \$3.2 million of expenses associated with the execution of a sublease for the facility.

The following table provides our Adjusted income tax provisions for the years ended December 31, 2018, 2017 and 2016, as well as a reconciliation to income tax benefit (provision):

(In thousands)	Years Ended December 31,		
	2018	2017	2016
GAAP income tax (provision) benefit ¹	\$ (10,305)	\$ 56,385	\$ (31,112)
Adjustments, tax impact:			
Directors' equity-based compensation	523	952	(1,693)
Gain associated with the sale of the Ladysmith facility, net	10,444	—	—
Reorganization related expenses associated with SG&A cost control measures	(1,721)	(757)	—
Impact of state tax reform	(676)	—	—
Consumer products reorganization related expenses	(274)	—	—
Other	(151)	—	—
Federal tax rate change ¹	—	(70,055)	—
Costs associated with Oklahoma City facility closure	—	(4,977)	(589)
Costs associated with Long Island facility closure	—	(686)	(672)
Accelerated depreciation of assets as a result of warehouse automation project	—	(121)	—
Manchester Industries acquisition related expenses	—	(74)	(465)
Write-off of assets as a result of warehouse automation project	—	(14)	—
Gain associated with the sale of the specialty mills, net	—	—	626
Costs associated with Neenah paper machines shutdown	—	—	(371)
Pension settlement expense	—	—	(1,242)
Adjusted income tax provision	\$ (2,160)	\$ (19,347)	\$ (35,518)

¹ The benefit in 2017 is primarily due to the remeasurement of deferred tax liabilities as a result of the Act signed into law on December 22, 2017. The resulting net tax benefit is excluded from our adjusted non-GAAP earnings.

LIQUIDITY AND CAPITAL RESOURCES

The following table presents information regarding our cash flows for the years ended December 31, 2018, 2017 and 2016.

Cash Flows Summary

(In thousands)	Years Ended December 31,		
	2018	2017	2016
Net cash flows from operating activities ¹	\$ 168,899	\$ 178,670	\$ 172,751
Net cash flows from investing activities	(223,971)	(198,797)	(222,506)
Net cash flows from financing activities	63,281	13,864	67,146

¹ In 2018, we adopted a new accounting standard, ASU 2016-18, which required a change in the presentation of cash, cash equivalents, and restricted cash in the statement of cash flows. As a result of adopting this standard, the net cash flows from operating activities increased by \$1.0 million for 2017. There were no changes to the 2016 presentation as previously reported.

Operating Activities—Net cash flows from operating activities for 2018 decreased by \$9.8 million compared to 2017. The decrease in operating cash flows was driven by a \$27.7 million decrease in earnings, after adjusting for non cash related items, as well as a decrease of \$5.6 million in cash flows generated from changes in working capital in 2018 compared to the same period in 2017. This decrease in net cash flows from operating activities was partially offset by a net \$14.0 million decrease in taxes receivable in 2018, as a result of cash received from income tax refunds, compared to a \$10.6 million increase in taxes receivable in 2017.

Net cash flows from operating activities for 2017 increased by \$5.9 million compared to 2016. The increase in operating cash flows was driven by \$21.8 million of positive cash flows generated from changes in working capital in 2017, largely

due to an increase in accounts payable and accrued liabilities, compared to \$3.5 million of negative cash flows for changes in working capital in 2016. This increase in net cash flows from operating activities was partially offset by a net \$10.6 million increase in taxes receivable in 2017, compared to a \$5.1 million decrease in taxes receivable in 2016. The change in the taxes receivable balance for 2017 was due to increased tax depreciation relating to our strategic capital projects, which lessened our tax burden and increased the amount of refund we expected to receive.

Investing Activities—Net cash flows used for investing activities increased \$25.2 million in 2018 compared to 2017. This increase was largely driven by a \$96.0 million increase in cash paid for plant and equipment in 2018, driven largely by spending on our new tissue machine and related converting equipment in Shelby, North Carolina. That increase in cash used for investing activities was partially offset by \$70.9 million of net cash proceeds from divested assets, which resulted from the sale of our Ladysmith facility in the third quarter of 2018. In addition to cash paid for plant and equipment, we also incurred \$42.2 million of non-cash additions related to accrued payables for plant and equipment in 2018, which is also largely associated with our Shelby expansion project.

Net cash flows used for investing activities decreased \$23.7 million in 2017 compared to 2016. This decrease was largely driven by the acquisition of Manchester Industries in 2016 for \$67.4 million, net of cash acquired, partially offset by a \$44.4 million increase in cash spent for plant and equipment in 2017, which increased due to our investments in strategic capital projects, including a continuous pulp digester project at our Lewiston, Idaho facility and our Shelby expansion project.

Financing Activities—Net cash flows from financing activities were \$63.3 million for 2018, and were largely driven by net borrowings on short-term debt of \$65.8 million primarily used to fund the expansion of our Shelby, North Carolina facility.

Net cash flows from financing activities were \$13.9 million for 2017, and were largely driven by net borrowings on our revolving credit facilities of \$20.0 million, partially offset by \$4.9 million in repurchases of our outstanding common stock pursuant to our stock repurchase program.

Capital Resources

Due to the competitive and cyclical nature of the markets in which we operate, there is uncertainty regarding the amount of cash flows we will generate during the next twelve months. However, we believe that our cash flows from operations, our cash on hand and our borrowing capacity under our senior secured revolving credit facilities will be adequate to fund debt service requirements and provide cash required to support our ongoing operations, capital expenditures and working capital needs for the next twelve months.

We may choose to refinance all or a portion of our indebtedness on or before maturity. We cannot be certain that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all.

At December 31, 2018 and 2017, our financial position included gross debt of \$795.8 million and \$730.0 million, respectively. Stockholders' equity at December 31, 2018 was \$426.4 million, compared to \$575.4 million at the end of 2017. Our total debt to total capitalization, excluding accumulated other comprehensive loss, was 61.6% at December 31, 2018, compared to 53.9% at December 31, 2017.

Capital Expenditures

In addition to ongoing maintenance and repair costs, we make capital expenditures to increase our operating capacity and efficiency, improve safety at our facilities and comply with environmental laws. In 2018, we incurred \$328.9 million in capital expenditures, excluding capitalized interest of \$9.0 million, which included \$311.1 million of capital spending on strategic projects and other projects designed to reduce future manufacturing costs and provide a positive return on investment. These strategic projects in 2018 and 2017 consist primarily of the expansion of our Shelby, North Carolina facility and the continuous pulp digester at our Idaho pulp and paperboard facility. During 2017, excluding capitalized interest of \$4.6 million, we spent \$194.0 million on capital expenditures, which included \$152.6 million of strategic capital spending. In 2019, we expect cash paid for capital expenditures to be approximately \$130 to \$140 million.

Debt Arrangements

\$300 Million Senior Notes Due 2025

On July 29, 2014, we issued \$300 million aggregate principal amount of Senior Notes due 2025, which we refer to as the 2014 Notes, that mature on February 1, 2025, have an interest rate of 5.375% and were issued at their face value.

Our 2019 expected debt service obligation related to the 2014 Notes, consisting of cash payments for interest, is \$16.1 million.

\$275 Million Senior Notes Due 2023

On February 22, 2013, we issued \$275 million aggregate principal amount of 4.5% senior notes due 2023, which we refer to as the 2013 Notes.

Our 2019 expected debt service obligation related to the 2013 Notes, consisting of cash payments for interest, is \$12.4 million.

Revolving Credit Facilities

After giving effect to a revolving commitment increase described below, our senior secured revolving credit facilities provide in the aggregate, on a combined basis, for the extension of up to \$400 million in revolving loans under: (i) a \$200 million credit agreement with Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto (the "Commercial Credit Agreement"); and (ii) a \$200 million credit agreement with Northwest Farm Credit Services, PCA, as administrative agent, and the lenders party thereto (the "Farm Credit Agreement"). These revolving credit facilities were initially entered into on October 31, 2016 and we refer to them collectively as the "Credit Agreements." In August, 2018, we entered into an agreement with a lender to the Farm Credit Agreement to provide an incremental revolving loan commitment, which increased the size of the Farm Credit Agreement from \$100 million to \$200 million. The revolving credit facilities provided under the Credit Agreements mature on October 31, 2021.

We may separately request incremental commitments under either Credit Agreement to increase the amount of revolving loans or to provide term loans under such Credit Agreement. After obtaining the \$100 million incremental revolving commitment to the Farm Credit Agreement in August 2018, the aggregate amount of incremental commitments we may request may not exceed \$100 million (on a combined basis under both Credit Agreements), plus an additional amount, not to exceed \$100 million (also on a combined basis under both Credit Agreements), such that our first lien leverage ratio on a pro forma basis, as defined, does not exceed 3.00 to 1.00, subject to certain customary conditions and receipt of commitments by existing or additional lenders. In addition, after giving effect to the amount of any incremental borrowing under the Farm Credit Agreement, the principal amount of all unfunded revolving loan commitments and the outstanding amount of any term loans provided under the Farm Credit Agreement (if any) cannot exceed 50% of the sum of the outstanding principal amount of the loans and unfunded commitments under the Farm Credit Agreement and the Commercial Credit Agreement on a combined basis.

Revolving Loans borrowed under the Credit Agreements bear interest, at our option, at a LIBOR rate, a base rate, or, in the case of the Farm Credit Agreement, a one-, two-, three-, four-, or five-year fixed rate, plus, in each case, an applicable margin. Prior to an amendment to each Credit Agreement in November 2018, the per annum margin applicable to LIBOR rate loans could range from 1.25% to 2.00% under the Commercial Credit Agreement, and from 1.50% to 2.25% under the Farm Credit Agreement, in each case, depending on changes to our consolidated leverage ratio. Following the amendment in November 2018, the per annum margin applicable to LIBOR rate loans can now range from 1.25% to 2.50% under the Commercial Credit Agreement, and from 1.50% to 3.50% under the Farm Credit Agreement. The margin applicable to fixed rate loans under the Farm Credit Agreement is the same as the margin applicable to LIBOR rate loans under the Farm Credit Agreement. The margin applicable to base rate loans under both Credit Agreements is always 1.00% per annum less than the corresponding margin for LIBOR rate loans. We also pay commitment fees on the unused portion of the revolving loan commitments under the Credit Agreements, which range from 0.20% per annum to 0.40% per annum, depending on changes to our consolidated leverage ratio. Prior to the November 2018 amendment, this commitment fee could not exceed 0.35% per annum.

The Credit Agreements are secured by substantially all of the personal property of the Company and its domestic subsidiaries through separate liens granted under each Credit Agreement for the benefit of each secured party thereunder on an equal and ratable basis. The Company's obligations under the Credit Agreements are guaranteed by the Company's domestic subsidiaries.

The Credit Agreements contain various loan covenants that restrict the ability of the Company and its subsidiaries to take certain actions, including, incurrence of indebtedness, creation of liens, mergers or consolidations, dispositions of assets, repurchase or redemption of capital stock, making certain investments, entering into certain transactions with affiliates or changing the nature of their business. In addition, the Credit Agreements contain financial covenants that require the Company to maintain a consolidated secured leverage ratio in an amount not to exceed 2.00 to 1.00 in 2019, and 1.50 to 1.00 thereafter, a consolidated interest coverage ratio in an amount not less than 1.25 to 1.00, and a consolidated asset coverage ratio of not less than 1.00 to 1.00.

Each Credit Agreement also contains customary events of default, including failure to make payments under such Credit Agreement, breach of any representation or warranty or covenant under such Credit Agreement, default under or acceleration of other indebtedness for borrowed money in excess of an agreed amount, any change in control of the Company based upon a third party acquiring more than 35% of the equity interests of the Company, bankruptcy events, invalidity of such credit agreement, the incurrence of certain liabilities, termination events or withdrawals from specified benefit plans, and unpaid or uninsured judgments in excess of an agreed amount.

We are members of the Northwest Farm Credit Services, PCA system which entitles us to patronage refunds and other distributions on account of our equity interests in the Northwest Farm Credit Services, PCA, as well as our patronage with Northwest Farm Credit Services. Patronage refunds are distributions of profits from member banks in the United States Farm Credit System, like Northwest Farm Credit Services, which are cooperatives (member owned) that distribute profits to their members in the form of patronage dividends, which are accrued as earned and recorded as offsets to interest expense under the Farm Credit Agreement.

As of December 31, 2018, there was an aggregate of \$200 million of borrowings outstanding under the Credit Agreements and we were in compliance with the covenants contained in the Credit Agreements. In addition, \$7.6 million of the credit facilities was being used to support outstanding standby letters of credit. The borrowings outstanding under the Credit Agreements as of December 31, 2018, consisted of a combination of short-term base and LIBOR rate loans which are classified as current liabilities in our Consolidated Balance Sheet, and a \$100.0 million fixed rate, three-year borrowing under the Farm Credit Agreement that is included in "Long-term debt," in our Consolidated Balance Sheet. As of December 31, 2018, we would have been permitted to draw an additional \$192.4 million of revolving loans under the Credit Agreements.

Please see Part II, Note 10, "Debt" of this report for information relating to our senior notes and revolving credit facilities.

CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations as of December 31, 2018. Portions of the amounts shown are reflected in our financial statements and accompanying notes, as required by GAAP. See the footnotes following the table for information regarding the amounts presented and for references to relevant financial statement notes that include a detailed discussion of the item.

(In thousands)	Payments Due by Period				
	Total	2019	2020-2021	2022-2023	Thereafter
Short-term debt	\$ 120,833	\$ 120,833	\$ —	\$ —	\$ —
Long-term debt ¹	675,000	—	100,000	—	575,000
Interest on long-term debt ¹	187,663	33,230	63,307	50,813	40,313
Capital leases ²	36,785	3,093	6,174	5,808	21,710
Operating leases ²	74,811	12,038	21,845	16,652	24,276
Purchase obligations ³	391,532	358,368	20,745	8,311	4,108
Other obligations ^{4,5}	226,615	160,659	13,114	10,398	42,444
Total	\$ 1,713,239	\$ 688,221	\$ 225,185	\$ 91,982	\$ 707,851

¹ Included above are the principal and interest payments that were due, as of December 31, 2018, on our 2013 and 2014 Notes and our fixed-rate, three-year borrowings under our credit facilities. For more information regarding specific terms of our long-term debt, see Note 10, "Debt," in the notes to the consolidated financial statements.

² These amounts represent our minimum capital lease payments, including amounts representing interest, and our minimum operating lease payments. See Note 17, "Commitments and Contingencies," in the notes to the consolidated financial statements.

³ Purchase obligations consist primarily of contracts for the purchase of raw materials (primarily pulp) from third parties, trade accounts payable as of December 31, 2018, contracts for outside wood chipping and contracts with natural gas and electricity providers.

⁴ Included in other obligations are accrued liabilities and accounts payable (other than certain trade accounts payable balances included as "purchase obligations" above) as of December 31, 2018, liabilities associated with supplemental pension and deferred compensation arrangements, and estimated payments on postretirement employee benefit plans.

⁵ Total excludes \$2.8 million of unrecognized tax benefits due to the uncertainty of timing of payment. See Note 8, "Income Taxes," in the notes to the consolidated financial statements.

OFF-BALANCE SHEET ARRANGEMENTS

We have no off-balance sheet arrangements that have had, or are reasonably likely to have, a material current or future effect on our financial conditions or consolidated financial statements.

ENVIRONMENTAL

Our operating facilities are subject to rigorous federal and state environmental regulation governing air emissions, wastewater discharges, and solid and hazardous waste management. Our goal is continuous compliance with all

environmental regulations and we regularly monitor our activities to ensure compliance with all pertinent rules and requirements. Compliance with environmental regulations is a significant factor in our business and requires periodic capital expenditures as well as additional operating costs as rules change.

Concern over climate change, including the impact of global warming, may lead to future regulations. We believe there are no U.S. rules currently proposed that would have a material impact on our operations.

Our facilities are currently in substantial compliance with applicable environmental laws and regulations. We cannot be certain, however, that situations that may give rise to material environmental liabilities will not be discovered or that the enactment of new environmental laws or regulations or changes in existing laws or regulations will not require significant expenditures by us.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in accordance with GAAP requires our management to select and apply accounting policies that best provide the framework to report the results of operations and financial position. The selection and application of those policies requires management to make difficult, subjective and complex judgments concerning reported amounts of revenue and expenses during the reporting period and the reported amounts of assets and liabilities at the date of the financial statements. As a result, it is possible that materially different amounts would be reported under different conditions or using different assumptions.

See Note 3, "Recently Adopted and New Accounting Standards" to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for additional information regarding recently adopted and new accounting pronouncements.

Goodwill.

As of December 31, 2018 and December 31, 2017, we had \$35.1 million and \$244.2 million, respectively, of goodwill included on our Consolidated Balance Sheet. Goodwill is not amortized but tested for impairment annually as of each November 1st and at any time when events suggest impairment may have occurred, such as a significant adverse change in the business climate or a sustained drop in the company's market capitalization. If the carrying amount of a reporting unit exceeds the estimated fair value of that reporting unit, a goodwill impairment loss is recognized equal to the excess of the reporting unit's carrying amount over its estimated fair value.

In late April 2018, we experienced a significant decrease in our market capitalization after announcing lower first quarter financial results and a reduced second quarter sales outlook for our Consumer Products reporting unit. We identified this as a triggering event and tested the goodwill allocated to this reporting unit for impairment as of May 31, 2018. To determine the fair value of the Consumer Products reporting unit, we used a discounted cash flow methodology utilizing our most recent financial projections that take into account a variety of factors including industry and market conditions. Compared to the previous projections utilized during the November 1, 2017 impairment test, our estimates as of May 31, 2018 did not show significant adverse changes to the reporting unit's projected operating results for future periods. As a result, we determined that the fair value of the reporting unit exceeded its carrying value as of that testing date.

In August 2018, we sold our Ladysmith, Wisconsin tissue manufacturing facility for net cash proceeds of approximately \$71 million. In connection with the sale, we recorded a \$14.0 million write-off of goodwill of the Consumer Products reporting unit. Consistent with authoritative guidance, the goodwill was allocated to our divested assets by estimating the fair value of the Ladysmith facility compared to the estimated fair value of the Consumer Products reporting unit, which was then used to estimate the amount of goodwill to allocate to the sold business.

We conducted our annual impairment test as of the November 1, 2018 measurement date and concluded, in connection with the preparation of our 2018 financial statements, that the estimated fair value of the Consumer Products reporting unit was below the carrying value of the reporting unit, resulting in a non-cash impairment charge of \$195.1 million. This amount represents the remaining goodwill associated with our Consumer Products reporting unit that was originally recorded as the result of our acquisition of Cellu Tissue Holdings, Inc. in 2010.

To determine the fair value of the Consumer Products reporting unit, we used the same discounted cash flow methodology utilized in the May 2018 and November 2017 goodwill impairment tests. Our most recent estimates for 2019 and future years were based on market data obtained in the fall of 2018 indicating that in 2019 and future years, we expect lower pricing for certain tissue products, lower converted case sales volumes, a higher mix of parent roll sales, and increased transportation and pulp costs compared to the financial projections used in May 2018. In light of the weakened market outlook, our forecast yielded a fair value less than the carrying value of the Consumer Products reporting unit, resulting in the impairment of goodwill. We also performed an overall reconciliation to corroborate the

estimated fair value from the income approach to our overall market capitalization as of the November 1, 2018 measurement date.

As of the November 1, 2018 measurement date, the fair value of our Pulp and Paperboard reporting unit was clearly in excess of its carrying value, so no goodwill associated with this reporting unit has been written down. Refer to Note 7, "Goodwill and Intangible Assets" to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for additional information.

Pension and postretirement employee benefits. The determination of pension plan expense and the requirements for funding our pension plans are based on a number of actuarial assumptions. Note 13, "Savings, Pension and Other Postretirement Employee Benefit Plans," in the notes to the consolidated financial statements includes information for the three years ended December 31, 2018, 2017 and 2016, on the components of pension expense and other postretirement employee benefit, or OPEB, expense and income and the underlying actuarial assumptions used to calculate periodic expense, as well as the funded status for our pension and OPEB plans as of December 31, 2018 and 2017.

The assumption that has the largest impact on the determination of plan expense and the funded status of our pension and OPEB plans is the discount rate. The discount rate used in the determination of pension benefit obligations and pension expense is determined based on a review of long-term high-grade bonds and management's expectations. At December 31, 2018, we calculated obligations using a 4.40% discount rate. The discount rates used at December 31, 2017 and 2016 were 3.90% and 4.45%, respectively. An increase in the discount rate, all other assumptions remaining the same, would decrease pension plan expense, and conversely, a decrease would increase plan expense. As an indication of the sensitivity that pension expense has to the discount rate assumption, a 25 basis point change in the discount rate would affect annual plan expense by approximately \$0.5 million. Additionally, a 25 basis point decrease in the discount rate would increase the pension benefit obligation by approximately \$8.0 million.

The discount rates used to calculate OPEB obligations, which were determined using the same methodology we used for our pension plans, were 4.55%, 3.95% and 4.30% at December 31, 2018, 2017 and 2016, respectively. As an indication of the sensitivity that OPEB income has to the discount rate assumption, a 25 basis point change in the discount rate would affect plan income by approximately \$0.1 million. Additionally, a 25 basis point decrease in the discount rate would increase the OPEB benefit obligation by approximately \$1.4 million.

Our company-sponsored pension plans were underfunded by a net \$25.3 million at December 31, 2018 and \$6.8 million at December 31, 2017. Our OPEB plans are unfunded and represent a liability of \$60.3 million and \$65.1 million as of December 31, 2018 and 2017, respectively.

ITEM 7A.

Quantitative and Qualitative Disclosures About Market Risks

Interest Rate Risk

Our exposure to market risks on financial instruments includes interest rate risk on our secured revolving credit facilities. As of December 31, 2018, there were \$200.0 million in borrowings outstanding under our revolving credit facilities. The interest rates applied to borrowings under the credit facilities are adjusted often and therefore react quickly to any movement in the general trend of market interest rates. For example, a one percentage point increase or decrease in interest rates, based on assumed outstanding credit facilities' borrowings of \$200.0 million, would have a \$2.0 million annual effect on interest expense. During 2018, we reduced our short-term interest rate risk through the use of a short-term LIBOR Rate option for \$100.0 million and negotiated a fixed, long-term rate on the remaining \$100 million, of our total outstanding credit facilities' borrowings balance of \$200.0 million, reducing the Company's exposure to variable rate debt.

We currently do not attempt to alleviate the effects of short-term interest rate fluctuations on our credit facilities' borrowings through the use of derivative financial instruments.

Commodity Risk

We are exposed to market risk for changes in natural gas commodity pricing, which we partially mitigate through the use of firm price contracts for a portion of the natural gas requirements of our manufacturing facilities. As of December 31, 2018, these contracts covered approximately 14% of our expected average monthly requirements for 2019, including approximately 12% of the expected average monthly requirements for the first quarter of 2019.

Foreign Currency Risk

We have minimal foreign currency exchange risk. Nearly all of our international sales are denominated in U.S. dollars.

Quantitative Information about Market Risks

(Dollars in thousands)	Expected Maturity Date						Total
	2019	2020	2021	2022	2023	Thereafter	
Long-term debt:							
Fixed rate	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 575,000	\$ 575,000
Revolving credit facility	—	—	100,000	—	—	—	100,000
Average interest rate	—%	—%	4.730%	—%	—%	4.957%	4.923%
Fair value at December 31, 2018							\$ 612,546

ITEM 8.

Financial Statements and Supplementary Data

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Financial Statement Schedules:

All schedules have been omitted because the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements, including the notes thereto.

CLEARWATER PAPER CORPORATION

Consolidated Statements of Operations

(Dollars in thousands – except per-share amounts)

	For The Years Ended December 31,		
	2018	2017	2016
Net sales	\$ 1,724,218	\$ 1,730,408	\$ 1,734,763
Costs and expenses:			
Cost of sales	(1,538,012)	(1,530,341)	(1,493,559)
Selling, general and administrative expenses	(112,988)	(128,882)	(128,195)
Goodwill impairment	(195,079)	—	—
Gain on divested assets, net	23,952	—	1,755
Total operating costs and expenses	(1,822,127)	(1,659,223)	(1,619,999)
(Loss) income from operations	(97,909)	71,185	114,764
Interest expense, net	(30,620)	(31,374)	(30,651)
Non-operating pension and other post employment benefit (costs) income	(4,933)	1,143	(3,447)
(Loss) earnings before income taxes	(133,462)	40,954	80,666
Income tax (provision) benefit	(10,305)	56,385	(31,112)
Net (loss) earnings	\$ (143,767)	\$ 97,339	\$ 49,554
Net (loss) earnings per common share:			
Basic	\$ (8.72)	\$ 5.91	\$ 2.91
Diluted	(8.72)	5.88	2.90

The accompanying notes are an integral part of these consolidated financial statements.

CLEARWATER PAPER CORPORATION

Consolidated Statements of Comprehensive Income (Loss)

(In thousands)

	For The Years Ended December 31,		
	2018	2017	2016
Net (loss) earnings	\$ (143,767)	\$ 97,339	\$ 49,554
Other comprehensive (loss) income, net of tax:			
Defined benefit pension and other postretirement employee benefits:			
Net (loss) gain arising during the period, net of tax of \$(5,717), \$2,409, and \$248	(16,036)	6,745	379
Amortization of actuarial loss included in net periodic cost, net of tax of \$2,397, \$1,305, and \$1,576	6,759	1,951	2,321
Amortization of prior service credit included in net periodic cost, net of tax of \$(440), \$(601), and \$(669)	(1,236)	(926)	(1,021)
Settlement, net of tax of \$-, \$-, and \$1,366	—	—	2,116
Other comprehensive (loss) income, net of tax	(10,513)	7,770	3,795
Comprehensive (loss) income	\$ (154,280)	\$ 105,109	\$ 53,349

The accompanying notes are an integral part of these consolidated financial statements.

CLEARWATER PAPER CORPORATION

Consolidated Balance Sheets

(Dollars in thousands – except share data)

	At December 31,	
	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 22,484	\$ 15,738
Receivables, net	145,519	142,065
Taxes receivable	6,301	20,282
Inventories	266,244	266,043
Other current assets	3,399	8,661
Total current assets	443,947	452,789
Property, plant and equipment, net	1,269,271	1,050,982
Goodwill	35,074	244,161
Intangible assets, net	24,080	32,542
Other assets, net	15,746	21,778
TOTAL ASSETS	\$ 1,788,118	\$ 1,802,252
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	\$ 120,833	\$ 155,000
Accounts payable and accrued liabilities	321,032	256,621
Current liability for pensions and other postretirement employee benefits	7,430	7,631
Total current liabilities	449,295	419,252
Long-term debt	671,292	570,524
Liability for pensions and other postretirement employee benefits	78,191	72,469
Other long-term obligations	38,977	43,275
Accrued taxes	2,785	2,770
Deferred tax liabilities	121,182	118,528
TOTAL LIABILITIES	1,361,722	1,226,818
Stockholders' equity:		
Preferred stock, par value \$0.0001 per share, 5,000,000 authorized shares, no shares issued	—	—
Common stock, par value \$0.0001 per share, 100,000,000 authorized shares -16,482,345 and 16,447,898 shares issued	2	2
Additional paid-in capital	6,403	1,161
Retained earnings	487,339	618,254
Accumulated other comprehensive loss, net of tax	(67,348)	(43,983)
Total stockholders' equity	426,396	575,434
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 1,788,118	\$ 1,802,252

The accompanying notes are an integral part of these consolidated financial statements.

CLEARWATER PAPER CORPORATION

Consolidated Statements of Cash Flows

(in thousands)

For The Years Ended December 31,

	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES			
Net (loss) earnings	\$ (143,767)	\$ 97,339	\$ 49,554
Adjustments to reconcile net (loss) earnings to net cash flows from operating activities:			
Goodwill impairment	195,079	—	—
Depreciation and amortization	101,953	104,990	91,090
Equity-based compensation expense	3,314	3,620	12,385
Deferred taxes	7,084	(40,589)	18,327
Employee benefit plans	(116)	(4,371)	(1,979)
Deferred issuance costs on debt	1,356	1,199	1,242
Gain on divested assets, net	(25,510)	—	—
Disposal of plant and equipment, net	726	4,053	1,381
Other non-cash activity	146	1,750	758
Changes in working capital, net of acquisition	16,200	21,761	(3,462)
Change in taxes receivable, net	13,980	(10,573)	5,142
Other, net	(1,546)	(509)	(1,687)
Net cash flows from operating activities	168,899	178,670	172,751
CASH FLOWS FROM INVESTING ACTIVITIES			
Additions to property, plant and equipment	(295,708)	(199,748)	(155,349)
Acquisition of Manchester Industries, net of cash acquired	—	—	(67,443)
Net proceeds from divested assets	70,930	—	—
Other, net	807	951	286
Net cash flows from investing activities	(223,971)	(198,797)	(222,506)
CASH FLOWS FROM FINANCING ACTIVITIES			
Purchase of treasury stock	—	(4,875)	(65,327)
Borrowings on short-term debt	630,848	298,308	1,273,959
Repayments of borrowings on short-term debt	(565,015)	(278,308)	(1,138,959)
Payments for debt issuance costs	(2,139)	(134)	(1,906)
Payment of tax withholdings on equity-based payment arrangements	(413)	(1,127)	(933)
Other, net	—	—	312
Net cash flows from financing activities	63,281	13,864	67,146
Increase (decrease) in cash, cash equivalents and restricted cash	8,209	(6,263)	17,391
Cash, cash equivalents and restricted cash at beginning of period	16,738	23,001	5,610
Cash, cash equivalents and restricted cash at end of period	\$ 24,947	\$ 16,738	\$ 23,001
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest, net of amounts capitalized	\$ 26,134	\$ 28,085	\$ 26,690
Cash paid for income taxes	3,736	2,684	17,655
Cash received from income tax refunds	14,290	7,638	11,289
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING ACTIVITIES:			
Changes in accrued property, plant and equipment	\$ 42,242	\$ (1,063)	\$ 328
Non-cash reclassification of credit facility borrowings to long-term debt	100,000	—	—
Other changes to property, plant and equipment, net	1,691	4,241	—

The accompanying notes are an integral part of these consolidated financial statements.

CLEARWATER PAPER CORPORATION

Consolidated Statements of Stockholders' Equity

(In thousands)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount			Shares	Amount		
Balance at December 31, 2015	24,193	\$ 2	\$ 340,095	\$ 520,307	(6,380)	\$ (329,990)	\$ (55,548)	\$ 474,866
Net earnings	—	—	—	49,554	—	—	—	49,554
Performance share, restricted stock unit, and stock option awards	30	—	6,985	—	—	—	—	6,985
Pension and OPEB, net of tax of \$2,521	—	—	—	—	—	—	3,795	3,795
Purchase of treasury stock	—	—	—	—	(1,356)	(65,327)	—	(65,327)
Balance at December 31, 2016	24,223	\$ 2	\$ 347,080	\$ 569,861	(7,736)	\$ (395,317)	\$ (51,753)	\$ 469,873
Net earnings	—	—	—	97,339	—	—	—	97,339
Performance share, restricted stock unit, and stock option awards	46	—	5,327	—	—	—	—	5,327
Pension and OPEB, net of tax of \$3,113	—	—	—	—	—	—	7,770	7,770
Purchase of treasury stock	—	—	—	—	(85)	(4,875)	—	(4,875)
Retirement of treasury stock	(7,821)	—	(351,246)	(48,946)	7,821	400,192	—	—
Balance at December 31, 2017	16,448	\$ 2	\$ 1,161	\$ 618,254	—	\$ —	\$ (43,983)	\$ 575,434
Net loss	—	—	—	(143,767)	—	—	—	(143,767)
Performance share, restricted stock unit, and stock option awards	34	—	5,242	—	—	—	—	5,242
Reclassification of the income tax effects of the Tax Cuts and Jobs Act	—	—	—	12,852	—	—	(12,852)	—
Pension and OPEB, net of tax of \$3,760	—	—	—	—	—	—	(10,513)	(10,513)
Balance at December 31, 2018	16,482	\$ 2	\$ 6,403	\$ 487,339	—	\$ —	\$ (67,348)	\$ 426,396

The accompanying notes are an integral part of these consolidated financial statements.

CLEARWATER PAPER CORPORATION

Notes to Consolidated Financial Statements

NOTE 1 Nature of Operations and Basis of Presentation

Clearwater Paper manufactures quality consumer tissue, away-from-home tissue, parent roll tissue, bleached paperboard and pulp at manufacturing facilities across the nation. The Company is a premier supplier of private label tissue to major retailers and wholesale distributors, including grocery, drug, mass merchants and discount stores. In addition, the Company produces bleached paperboard used by quality-conscious printers and packaging converters, and offers services that include custom sheeting, slitting and cutting. Clearwater Paper's employees build shareholder value by developing strong customer relationships through quality and service.

Unless the context otherwise requires or unless otherwise indicated, references in this report to "Clearwater Paper Corporation," "we," "our," "the Company" and "us" refer to Clearwater Paper Corporation and its subsidiaries.

On December 16, 2016, we acquired Manchester Industries, or Manchester, an independently-owned paperboard sales, sheeting and distribution supplier to the packaging and commercial print industries, for total consideration of \$71.7 million. The acquisition of Manchester's customers extends our reach and service platform to small and mid-sized folding carton plants, offering a range of converting services that include custom sheeting, slitting and cutting. Manchester's operations subsequent to the acquisition date are reflected in our financial statements.

On March 31, 2017, we closed our Oklahoma City, Oklahoma converting facility. Notwithstanding the closure, we remain subject to the terms of a long-term master lease applicable to the facility. In October 2017, we transferred to a third party substantially all of the remaining fixed assets and supplies inventory located at this facility and subleased the facility to the third party for the remaining term of the master lease for the facility. In connection with the transfer of fixed assets, we recorded a loss of \$4.3 million in the third quarter of 2017 related primarily to the write-down of the transferred assets to their held-for-sale value, and a loss of \$3.2 million in the fourth quarter of 2017 related to the execution of the sublease agreement, which is included in "Selling, general and administrative expenses" in our Consolidated Statement of Operations. The sublease agreement is expected to substantially reduce our cash requirements under the master lease over the term of the sublease. In addition to the above amounts, we incurred \$7.2 million of closure-related costs associated with the Oklahoma City facility for the twelve months ended December 31, 2017, which is largely included in "Cost of sales" in our Consolidated Statement of Operations.

On August 21, 2018, we sold our Ladysmith, Wisconsin manufacturing facility for net proceeds of approximately \$71 million and recorded a related gain on divested assets of \$24.0 million in 2018 associated with this sale. See Note 4, "Asset Divestiture" for further discussion.

These consolidated financial statements include the financial condition and results of operations of Clearwater Paper Corporation and its wholly-owned subsidiaries. All intercompany transactions and balances between operations within the company have been eliminated.

NOTE 2 Summary of Significant Accounting Policies

SIGNIFICANT ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the U.S., which we refer to in this report as GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. Significant areas requiring the use of estimates and measurement of uncertainty include determination of valuation for deferred tax assets, uncertain income tax positions, assessment of impairment of long-lived assets and goodwill, assessment of environmental matters, allocation of purchase price and fair value estimates for business combinations, equity-based compensation and pension and postretirement obligation assumptions. Actual results could differ from those estimates and assumptions.

CASH, CASH EQUIVALENTS AND RESTRICTED CASH

We consider all highly liquid instruments with maturities of three months or less to be cash equivalents. Cash that is held by a third party and has restrictions on its availability to us is classified as restricted cash. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported on the balance sheet that sum to the total of those same amounts shown in our Consolidated Statements of Cash Flows.

(In thousands)	December 31,		
	2018	2017	2016
Cash and cash equivalents	\$ 22,484	\$ 15,738	\$ 23,001
Restricted cash included in other assets, net	2,463	1,000	—
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	\$ 24,947	\$ 16,738	\$ 23,001

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost, including assets acquired under capital lease obligations and any interest costs capitalized, less accumulated depreciation. Depreciation of buildings, equipment and other depreciable assets is determined using the straight-line method. Estimated useful lives generally range from 10 to 40 years for land improvements; 10 to 40 years for buildings and improvements; 5 to 25 years for machinery and equipment; and 2 to 15 years for office and other equipment. Assets we acquire through business combinations have estimated lives that are typically shorter than the assets we construct or buy new.

We review the carrying value of our property, plant and equipment for impairment when events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. An impairment of property, plant and equipment exists when the carrying value is not considered to be recoverable through future undiscounted cash flows from operations and the carrying value of the assets exceeds the estimated fair value.

On August 21, 2018, we simultaneously announced and completed the sale of our Ladysmith, Wisconsin tissue manufacturing facility (the "Ladysmith Facility") for net proceeds of approximately \$71 million. This sale included \$26.8 million of net property, plant and equipment.

On March 31, 2017, we closed our Oklahoma City converting facility. For the twelve months ended December 31, 2017, we incurred \$14.7 million of costs associated with this announced closure, which includes \$3.7 million in accelerated depreciation on certain fixed assets. For the twelve months ended December 31, 2016, we incurred \$1.7 million of costs associated with this announced closure, which includes \$1.3 million in accelerated depreciation on certain fixed assets.

INTANGIBLE ASSETS

We use estimates in determining and assigning the fair value of the useful lives of intangible assets, the amount and timing of related future cash flows and fair values of the related operations. Our intangible assets have definite lives and are amortized over their estimated useful lives. We assess our intangible assets for impairment annually and when events or changes in circumstances indicate that the carrying amount may not be recoverable.

GOODWILL

Goodwill from an acquisition represents the excess of the cost of a business acquired over the net of the amounts assigned to assets acquired, including identifiable intangible assets and liabilities assumed. We use estimates in determining and assigning the fair value of goodwill, including the amount and timing of related future cash flows and fair values of the related operations. Goodwill is not amortized but is tested for impairment annually as of November 1, as well as any time when events suggest impairment may have occurred. In the event the carrying value of the reporting unit in which our goodwill is assigned exceeds the estimated fair value of that reporting unit, an impairment loss would be recognized to the extent the carrying amount of the reporting unit exceeds its implied fair value.

We recorded \$229.5 million of goodwill in connection with our acquisition of Cellu Tissue in December 2010. All of the recorded goodwill was assigned to our Consumer Products segment and reporting unit. As a result of the December 2014 sale of our Consumer Products segment's specialty business and mills, a portion of goodwill was allocated to the divested mills and included in our loss on divested assets. As the result of the August 2018 sale of the Ladysmith, Wisconsin manufacturing facility, a portion of goodwill was allocated to the sale of this business, resulting in a write-off of \$14.0 million of goodwill. We recorded \$35.1 million of goodwill in connection with our acquisition of Manchester. The goodwill from this acquisition is included in our Pulp and Paperboard segment.

We concluded that the estimated fair value of the Consumer Products reporting unit was less than its carrying value, resulting in a non-cash impairment charge of \$195.1 million, which represented the remaining goodwill from our Consumer Products reporting unit. See Note 7, "Goodwill and Intangible Assets" for further discussion.

PENSION AND OTHER POSTRETIREMENT EMPLOYEE BENEFITS

The determination of pension plan expense and the requirements for funding our pension plans are based on a number of actuarial assumptions. Three critical assumptions are the discount rate applied to pension plan obligations, the rate of return on plan assets and mortality rates. For other postretirement employee benefit, or OPEB, plans, which provide certain health care and life insurance benefits to qualified retired employees, significant assumptions in determining OPEB income are the discount rate applied to benefit obligations, and mortality rates. We also participate in multiemployer defined benefit pension plans. We make contributions to these multiemployer plans, as well as make contributions to a trust fund established to provide retiree medical benefits for a portion of these employees.

The discount rate used in the determination of pension benefit obligations and pension expense is determined based on a review of long-term high-grade bonds and management's expectations. To determine the expected long-term rate of return on pension assets, we employ a process that analyzes historical long-term returns for various investment categories, as measured by appropriate indices. These indices are weighted based upon the extent to which plan assets are invested in the particular categories in arriving at our determination of a composite expected return.

An increase in the discount rate or the rate of expected return on plan assets, all other assumptions remaining the same, would decrease pension plan expense, and conversely, a decrease in either of these measures would increase plan expense. The actual rates of return on plan assets may vary significantly from the assumptions used because of unanticipated changes in financial markets.

The estimated net loss and prior service cost (credit) for the defined benefit pension and OPEB plans is amortized from accumulated other comprehensive loss into net periodic cost (benefit) in accordance with current accounting guidance.

Net periodic pension and OPEB expenses are included in "Cost of sales" and "Selling, general and administrative expenses" in the Consolidated Statements of Operations. The expense is allocated to all business segments. In accordance with current accounting guidance governing defined benefit pension and other postretirement plans, at December 31, 2018 and 2017, long-term assets are recorded for overfunded single-employer plans and liabilities are recorded for underfunded single-employer plans. The funded status of a benefit plan is measured as the difference between plan assets at fair value and the projected benefit obligation. For underfunded single-employer plans, the estimated liability to be payable in the next twelve months is recorded as a current liability, with the remaining portion recorded as a long-term liability.

INCOME TAXES

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax basis and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The determination of our provision for income taxes requires significant judgment, the use of estimates, and the interpretation and application of complex tax laws. Significant judgment is required in assessing the timing and amounts of deductible and taxable items and the probability of sustaining uncertain tax positions. The benefits of uncertain tax positions are recorded in our consolidated financial statements only after determining a more-likely-than-not probability that the uncertain tax positions will withstand challenge, if any, from tax authorities. When facts and circumstances change, we reassess these probabilities and record any changes in the consolidated financial statements as appropriate.

REVENUE RECOGNITION

We enter into contracts that can include various combinations of tissue and paperboard products, which are generally distinct and accounted for as separate performance obligations.

Revenue is recognized at a point in time upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. Transfer of control typically occurs when the title and risk of loss passes to the customer. Shipping terms generally indicate when title and the risk of loss have passed. Revenue is recognized at shipment for sales when shipping terms are free on board, or FOB, shipping point. For sales where shipping terms are FOB destination, which represents the majority of

our shipping terms, revenue is recognized when the goods are received by the customer. Revenue from both domestic and foreign sales of our products can involve shipping terms of either FOB shipping point or FOB destination or other shipping terms, depending upon the sales agreement with the customer. We have elected to treat shipping and handling costs for FOB shipping point contracts as a fulfillment cost, not as a separate performance obligation. No revenue is recognized over time. We typically expense incremental direct costs of obtaining a contract (sales commissions) when incurred because the amortization period is generally 12 months or less. We have also elected to use the practical expedient to not disclose unsatisfied or partially satisfied performance obligations as we have no unsatisfied contracts where the remaining portions are expected to be satisfied in a period greater than one year.

We provide for trade promotions, customer cash discounts, customer returns and other deductions as reductions to net sales, which are accounted for as variable consideration when estimating the amount of revenue to recognize. Returns and credits are estimated at contract inception and updated at the end of each reporting period as additional information becomes available. Revenue net of returns and credits is only recognized to the extent that it is probable that a significant reversal of any incremental revenue will not occur. Significant judgment is required to determine the most probable amount of variable consideration to apply as a reduction to net sales. Revenue is recognized net of any taxes collected from customers, which are subsequently remitted to governmental authorities.

Payment terms and conditions vary by contract type. Terms generally include a requirement of payment within 30 days, and do not include a significant financing component.

Trade accounts receivable are stated at the amount we expect to collect. Trade accounts receivable do not bear interest. The allowance for doubtful accounts is our best estimate of the losses we expect will result from the inability of our customers to make required payments. We generally determine the allowance based on a combination of actual historical write-off experience and an analysis of specific customer accounts. As of December 31, 2018 and 2017, we had allowances for doubtful accounts of \$1.5 million and \$1.4 million, respectively. Bad debt expense, net, charged to selling, general and administrative expenses during 2018, 2017 and 2016 was \$0.4 million, \$0.2 million, and \$0.7 million, respectively. All other activity impacting the allowance for doubtful accounts was immaterial for all periods.

We had one customer in the Consumer Products segment, the Kroger Company, that accounted for approximately 11.1% of our total company net sales in 2018, approximately 15.3% of our total company net sales in 2017, and approximately 13.4% of our total company net sales in 2016.

Refer to Note 19, "Segment Information," for further information, including the disaggregation of revenue by segment, primary geographical market, and major product type.

ACCOUNT PURCHASE AGREEMENT

In June 2018, we entered into an agreement (the "Account Purchase Agreement") to offer to sell, on a revolving and discounted basis, certain trade accounts receivable balances to an unrelated third-party financial institution. If the financial institution purchases receivables thereunder, in its sole discretion, such transfers are accounted for as sales of receivables resulting in the receivables being de-recognized from our Consolidated Balance Sheet. The Account Purchase Agreement provides for the continuing sale of certain receivables on a revolving basis until June 2020 and automatically renews for successive one year terms, unless either party elects to terminate the Account Purchase Agreement in accordance with its terms. The maximum amount of receivables that may be sold at any time, prior to the settlement thereof, is \$60.0 million

For the second, third and fourth quarters of 2018, \$22.0 million, \$23.4 million, and \$23.4 million of receivables were sold under the Account Purchase Agreement, respectively. As of December 31, 2018, \$14.5 million of accounts receivable sold under the Asset Purchase Agreement were outstanding. The proceeds from these sales of receivables are included within the change in receivables in the operating activities section of the Consolidated Statements of Cash Flows. For the year ended December 31, 2018, we recorded factoring expense on sales of receivables of \$0.2 million, which is included in the "Selling, general and administrative expenses" line in the Consolidated Statement of Operations.

We have no retained interest in the receivables sold under the Account Purchase Agreement, however, we do have servicing responsibilities for the sold receivables. The fair value of the servicing arrangement was not material to the financial statements.

SUPPLY-CHAIN FINANCING

The Company has entered into supply-chain financing programs with financial intermediaries, which provide certain of our vendors the option to be paid by the financial intermediaries on our trade payables earlier than the due date on the applicable invoice. When a vendor receives an early payment on a trade payable it invoiced us for from a financial intermediary, we pay that financial intermediary the face amount of the invoice on the regularly scheduled due date.

If we reimburse these vendors for certain fees they may incur in connection with receiving an early payment on an invoice, the amount of such invoice that would have otherwise been included in our trade payables is included in our short term debt. As of December 31, 2018, and December 31, 2017, \$20.8 million and \$0 million, respectively, was included in "Short-term debt" on our Consolidated Balance Sheets related to invoices for which we had reimbursed our vendors' fees.

ENVIRONMENTAL

As part of our corporate policy, we have an ongoing process to monitor, report on and comply with environmental requirements. Based on this ongoing process, accruals for environmental liabilities that are not within the scope of specific authoritative guidance related to accounting for asset retirement obligations or conditional asset retirement obligations are established in accordance with guidance related to accounting for contingencies. We estimate our environmental liabilities based on various assumptions and judgments, the specific nature of which varies in light of the particular facts and circumstances surrounding each environmental liability. These estimates typically reflect assumptions and judgments as to the probable nature, magnitude and timing of required investigation, remediation and monitoring activities and the probable cost of these activities. Currently, we are not aware of any material environmental liabilities and have accrued only for specific costs related to environmental matters that we have determined are probable and for which an amount can be reasonably estimated. Fees for professional services associated with environmental and legal issues are expensed as incurred.

STOCKHOLDERS' EQUITY

On December 15, 2015, we announced that our Board of Directors had approved a stock repurchase program authorizing the repurchase of up to \$100 million of our common stock. The repurchase program authorizes purchases of our common stock from time to time through open market purchases, negotiated transactions or other means, including accelerated stock repurchases and 10b5-1 trading plans in accordance with applicable securities laws and other restrictions. We have no obligation to repurchase stock under this program and may suspend or terminate the program at any time. In total, we have repurchased 1,440,696 shares of our outstanding common stock pursuant to the repurchase program, of which 84,750 shares were repurchased during 2017 at an average price of \$57.53 per share. We did not repurchase shares during 2018. As of December 31, 2018, we had up to \$29.8 million of authorization remaining pursuant to this stock repurchase program.

During 2017, we retired 7,821,005 treasury shares. The impact of this retirement was reflected within the stockholders' equity line items on our Consolidated Balance Sheet.

DERIVATIVES

We had no activity during the years ended December 31, 2018, 2017 and 2016 that required hedge or derivative accounting treatment. However, to partially mitigate our exposure to market risk for changes in utility commodity pricing, we use firm price contracts to supply a portion of the natural gas requirements for our manufacturing facilities. As of December 31, 2018, these contracts covered approximately 14% of the expected average monthly requirements for 2019, including approximately 12% of the expected average monthly requirements for the first quarter. For the years ended December 31, 2018, 2017 and 2016, approximately 29%, 28%, and 45%, respectively, of our natural gas volumes were supplied through firm price contracts. These contracts qualify for treatment as "normal purchases or normal sales" under authoritative guidance and thus require no mark-to-market adjustment.

NOTE 3 Recently Adopted and New Accounting Standards

Recently Adopted

In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* to allow for reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act (Act). This ASU also requires certain disclosures about stranded tax effects. We adopted this standard on January 1, 2018, which resulted in the reclassification of \$12.9 million between retained earnings and accumulated other comprehensive loss (AOCL), increasing retained earnings and AOCL within the equity section of our Consolidated Balance Sheet.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting* to clarify when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The ASU was effective prospectively for annual periods beginning after December 15, 2017, including interim periods within

those annual periods. We adopted this standard on January 1, 2018. The adoption of this ASU did not have a material impact on our consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. The standard requires that an employer disaggregate the service cost component, presented within the "Cost of sales" and "Selling, general, and administrative" line items on our Consolidated Statements of Operations, from the other components of net periodic cost (benefit), which are now presented within the "Non-operating pension and other postretirement benefit (costs) income" line item in our Consolidated Statements of Operations. We adopted the standard effective January 1, 2018, which resulted in the retrospective presentation in the income statement of the disaggregated components and the prospective changes to the capitalized portion of both service cost and the other components within inventory. The adoption did not have a material impact on our consolidated financial statements. Refer to Note 13, "Savings, Pension and Other Postretirement Employee Benefit Plans," for further information, including the amounts associated with the reclassification of the components of net periodic cost as operating and non-operating.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*. The guidance requires entities to show the changes in cash, cash equivalents, and restricted cash in the statement of cash flows. In addition, transfers between cash, cash equivalents, and restricted cash are no longer reported as cash flow activities in the statement of cash flows. The ASU was effective for public business entities for fiscal years beginning after December 15, 2017, and we adopted this standard in 2018. As a result of adopting this standard, "Net cash flows from operating activities" and "Increase (decrease) in cash, cash equivalents, and restricted cash" line items on our Consolidated Statements of Cash Flows increased \$1.5 million and \$1.0 million for the years ended December 31, 2018 and 2017, respectively. There was no impact to our Consolidated Statements of Cash Flows for the year ended December 31, 2016.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The core principle of the new standard is for companies to recognize revenue in a manner that depicts the transfer of goods or services to customers in amounts that reflect the consideration, or payment, to which the company expects to be entitled in exchange for those goods or services. The standard requires enhanced disclosures about revenue, including revenue recognition policies to identify performance obligations to customers and significant judgments in measurement and recognition. We adopted the new revenue guidance effective January 1, 2018 using the cumulative effect method, and did not have an adjustment to retained earnings upon adoption. The standard was applied to open contracts at the date of initial application. Aside from expanded disclosures, the adoption of Topic 606 did not have a material impact on our consolidated financial statement line items, processes, or internal controls. Refer to Note 2, "Summary of Significant Accounting Policies," for information about the basis of revenue recognition, and Note 19, "Segment Information," for further information including the disaggregation of revenue by segment, primary geographical market, and major product type.

New Accounting Standards

In August 2018, the FASB issued ASU 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40)*. This ASU requires capitalization of certain implementation costs incurred in a cloud computing arrangement that is a service contract. Amendments in this ASU are effective for fiscal years beginning after December 15, 2019 and for interim periods therein, with early adoption permitted. We are currently assessing the timing of our adoption of this ASU and do not believe it will have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20)*, which modifies the disclosure requirements for defined benefit and other postretirement plans. This ASU eliminates certain disclosures associated with accumulated other comprehensive income, plan assets, related parties, and the effects of interest rate basis point changes on assumed health care costs, with other disclosures being added to address significant gains and losses related to changes in benefit obligations. This ASU also clarifies disclosure requirements for projected benefit and accumulated benefit obligations. The amendments in this ASU are effective for fiscal years ending after December 15, 2020, with early adoption permitted and adoption on a retrospective basis for all periods presented required. We are currently assessing the timing of our adoption of this ASU and do not believe it will have a material impact on our consolidated financial statements beyond updating footnote disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, and subsequent ASUs related to Topic 842, which requires substantially all leases be recognized on the balance sheet as a right-of-use (ROU) asset and a corresponding lease liability. Leases will be classified as operating or finance. The new guidance requires additional disclosures to help investors and other financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. We adopted this standard on January 1, 2019 using the modified retrospective transition approach at the January 1, 2019 effective date. Consequently, financial information in prior periods was not

restated. We elected the 'package of practical expedients' which permits us to not reassess our prior conclusions related to lease identification, lease classification, and initial direct costs. We did not elect the use of hindsight. As an accounting policy election, we will exclude short-term leases (term of 12 months or less) from the balance sheet presentation and will account for non-lease and lease components as a single lease component for most asset classes. We are finalizing the evaluation of the January 1, 2019 impact and estimate a material increase of lease-related assets and liabilities ranging from approximately \$80 million to \$90 million in the Consolidated Balance Sheets. The impact to our Consolidated Statements of Operations and Cash Flows is not expected to be material.

We reviewed all other new accounting pronouncements issued in the period and concluded that they are not applicable to our business.

NOTE 4 Asset Divestiture

On August 21, 2018, we simultaneously announced and completed the sale of our Ladysmith Facility for net cash proceeds of approximately \$71 million. We assessed the sale of this location under the relevant authoritative accounting guidance related to discontinued operations reporting and concluded that this divestiture of assets does not qualify for discontinued operations reporting as the Ladysmith Facility does not represent either a strategic shift in the Consumer Products segment, nor does it represent a major impact on our operations and financial results.

In total, \$24.0 million was recorded as "Gain on divested assets" and included as a component of operating income within our Consolidated Statement of Operations for the year ended December 31, 2018, as well as a component of our Consumer Products segment's operating income as disclosed in Note 19, "Segment Information." Among other offsets, the net gain on divested assets included a \$14.0 million write-off of goodwill. Consistent with authoritative guidance, the goodwill was allocated to our divested assets by estimating the fair value of the Ladysmith Facility compared to the estimated fair value of the Consumer Products reporting unit, which was then used to estimate the percentage of goodwill to allocate to the sale of this business. In addition, "Gain on divested assets" within our Consolidated Statement of Operations included a \$0.9 million intangible asset write-off related to certain identifiable customer relationship intangibles associated with the divested mill. Both the goodwill and intangible asset charges are discussed further in Note 7, "Goodwill and Intangible Assets."

In total, \$34.0 million of book value of assets were sold, consisting primarily of \$26.8 million of property, plant and equipment and \$3.4 million of inventory. As a result of this sale, we recorded working capital and indemnity contingencies of \$1.1 million and \$1.4 million, respectively, in the third quarter of 2018. In the fourth quarter of 2018, the working capital contingency was settled, and we received \$1.2 million as a result of the settlement, which is included in the "Gain on divested assets" amount discussed above. As of December 31, 2018, \$1.4 million of restricted cash associated with the indemnity contingency is included in "Other assets, net" on our December 31, 2018 Consolidated Balance Sheet.

NOTE 5 Inventories

(In thousands)	December 31,	
	2018	2017
Pulp, paperboard and tissue products	\$ 159,499	\$ 165,281
Materials and supplies	86,892	85,987
Logs, pulpwood, chips and sawdust	19,853	14,775
	\$ 266,244	\$ 266,043

At December 31, 2018, our inventories are stated at the lower of net realizable value or current average cost using the average cost method.

NOTE 6 Property, Plant and Equipment

(In thousands)	December 31,	
	2018	2017
Machinery and equipment	\$ 2,161,306	\$ 2,124,701
Buildings and improvements	381,071	340,042
Land improvements	84,525	49,908
Office and other equipment	49,980	46,467
Land	10,756	11,726
Construction in progress	273,291	114,424
	\$ 2,960,929	\$ 2,687,268
Less accumulated depreciation and amortization	(1,691,658)	(1,636,286)
	\$ 1,269,271	\$ 1,050,982

The December 31, 2018 and 2017 buildings and improvements and machinery and equipment combined balances include \$26.1 million and \$24.4 million, respectively, associated with capital leases.

Depreciation expense, including amounts associated with capital leases, totaled \$94.4 million, \$97.0 million and \$86.1 million in 2018, 2017 and 2016, respectively. Depreciation expense for the twelve months ended December 31, 2017 includes accelerated depreciation of \$3.7 million associated with the Oklahoma City facility closure. For 2018, 2017, and 2016, we capitalized \$9.0 million, \$4.6 million and \$2.3 million, respectively, of interest expense associated with the construction of a paper machine at our Shelby, North Carolina consumer products facility and the continuous pulp digester at our Lewiston, Idaho pulp and paperboard mill.

NOTE 7 Goodwill and Intangible Assets

As of December 31, 2018 and December 31, 2017, we had \$35.1 million and \$244.2 million, respectively, of goodwill included on our Consolidated Balance Sheets. Goodwill is not amortized but tested for impairment annually as of each November 1st and at any time when events suggest impairment may have occurred, such as a significant adverse change in the business climate or a sustained drop in the company's market capitalization. If the carrying amount of a reporting unit exceeds the estimated fair value of that reporting unit, a goodwill impairment loss is recognized equal to the excess of the reporting unit's carrying amount of over its estimated fair value.

In late April 2018, we experienced a significant decrease in our market capitalization after announcing lower first quarter financial results and a reduced second quarter sales outlook for our Consumer Products reporting unit. We identified this as a triggering event and tested the goodwill allocated to this reporting unit for impairment as of May 31, 2018. To determine the fair value of the Consumer Products reporting unit, we used a discounted cash flow methodology utilizing our most recent financial projections that take into account a variety of factors including industry and market conditions. Compared to the previous projections utilized during the November 1, 2017 impairment test, our estimates as of May 31, 2018 did not show significant adverse changes to the reporting unit's projected operating results for future periods. As a result, we determined that the fair value of the reporting unit exceeded its carrying value as of that testing date.

In August 2018, we sold our Ladysmith, Wisconsin tissue manufacturing facility for net cash proceeds of approximately \$71 million. In connection with the sale, we recorded a \$14.0 million write-off of goodwill of the Consumer Products reporting unit. Consistent with authoritative guidance, the goodwill was allocated to our divested assets by estimating the fair value of the Ladysmith facility compared to the estimated fair value of the Consumer Products reporting unit, which was then used to estimate the amount of goodwill to allocate to the sold business.

We conducted our annual impairment test as of the November 1, 2018 measurement date and concluded, in connection with the preparation of our 2018 financial statements, that the estimated fair value of the Consumer Products reporting unit was below the carrying value of the reporting unit, resulting in a non-cash impairment charge of \$195.1 million. This amount represents the remaining goodwill associated with our Consumer Products reporting unit that was originally recorded as the result of our acquisition of Cellu Tissue Holdings, Inc. in 2010.

To determine the fair value of the Consumer Products reporting unit, we used the same discounted cash flow methodology utilized in the May 2018 and November 2017 goodwill impairment tests. Our most recent estimates for

2019 and future years were based on market data obtained in the fall of 2018 indicating that in 2019 and future years, we expect lower pricing for certain tissue products, lower converted case sales volumes, a higher mix of parent roll sales, and increased transportation and pulp costs compared to the financial projections used in May 2018. In light of the weakened market outlook, our forecast yielded a fair value less than the carrying value of the Consumer Products reporting unit, resulting in the impairment of goodwill. We also performed an overall reconciliation to corroborate the estimated fair value from the income approach to our overall market capitalization as of the November 1, 2018 measurement date.

As of the November 1, 2018 measurement date, the fair value of our Pulp and Paperboard reporting unit was clearly in excess of its carrying value, so no goodwill associated with this reporting unit has been written down.

In prior years, we performed our annual goodwill impairment tests at November 1, 2017 and 2016 and determined that the estimated fair value of the Consumer Products and Pulp and Paperboard reporting units exceeded their respective carrying amounts. As a result, no impairment charges were recorded during 2017 and 2016.

Changes in the carrying value of goodwill are as follows:

(Dollars in thousands)	December 31, 2018		December 31, 2017	
Balance at beginning of year	\$	244,161	\$	244,283
Impairment of goodwill		(195,079)		—
Write-down of goodwill due to Ladysmith sale		(14,008)		—
Acquisition accounting adjustment		—		(122)
Balance at end of year	\$	35,074	\$	244,161
Goodwill by segment				
Consumer products	\$	—	\$	209,087
Pulp and paperboard		35,074		35,074
Total goodwill	\$	35,074	\$	244,161

Intangible asset amounts represent the acquisition date fair values of identifiable intangible assets acquired. The fair values of the intangible assets were determined by using the income approach, discounting projected future cash flows based on management's expectations of the current and future operating environment. The rates used to discount projected future cash flows reflected a weighted average cost of capital based on our industry, capital structure and risk premiums including those reflected in the current market capitalization. Definite-lived intangible assets are amortized over their useful lives, which have historically ranged from 5 to 10 years. Authoritative guidance under ASC 360, Property, Plant and Equipment, requires that the carrying amount of a long-lived asset with a definite life that is held-for-use be evaluated for recoverability whenever events or changes in circumstances indicate that the entity may be unable to recover the asset's carrying amount.

We assessed our definite-lived intangible assets for impairment in 2018 and 2017 and concluded that their carrying amounts were recoverable and that no further testing was necessary. We do not have any indefinite-lived intangible assets recorded from acquisitions.

Intangible assets at the balance sheet dates are comprised of the following:

(Dollars in thousands, lives in years)	December 31, 2018			
	Weighted Average Useful Life	Historical Cost	Accumulated Amortization	Net Balance
Customer relationships	9.4	\$ 56,453	\$ (35,469)	\$ 20,984
Trade names and trademarks	7.4	6,786	(4,029)	2,757
Other intangibles	6.0	572	(233)	339
Total intangible assets		\$ 63,811	\$ (39,731)	\$ 24,080

(Dollars in thousands, lives in years)	December 31, 2017			
	Weighted Average Useful Life	Historical Cost	Accumulated Amortization	Net Balance
Customer relationships	9.3	\$ 62,401	\$ (34,061)	\$ 28,340
Trade names and trademarks	7.4	6,786	(3,000)	3,786
Non-compete agreements	5.0	574	(574)	—
Other Intangibles	6.0	572	(156)	416
Total intangible assets		\$ 70,333	\$ (37,791)	\$ 32,542

As of December 31, 2018, estimated future amortization expense related to intangible assets is as follows (in thousands):

Years ending December 31,	Amount
2019	\$ 7,140
2020	3,246
2021	2,917
2022	2,217
2023	2,140
Thereafter	6,420
Total	\$ 24,080

NOTE 8 Income Taxes

(Loss) earnings before income taxes is comprised of the following amounts:

(In thousands)	For The Years Ended December 31,		
	2018	2017	2016
United States	\$ (133,462)	\$ 40,954	\$ 80,666

The income tax provision (benefit) is comprised of the following:

(In thousands)	For The Years Ended December 31,		
	2018	2017	2016
Current			
Federal	\$ 1,073	\$ (16,729)	\$ 7,434
State	2,148	933	5,351
Total current	3,221	(15,796)	12,785
Deferred			
Federal	3,569	(36,810)	15,573
State	3,515	(3,779)	2,754
Total deferred	7,084	(40,589)	18,327
Income tax provision (benefit)	\$ 10,305	\$ (56,385)	\$ 31,112

The income tax provision or benefit differs from the amount computed by applying the statutory federal income tax rate of 21.0% in 2018 and 35.0% in 2017 and 2016 to earnings before income taxes due to the following:

(In thousands)	For The Years Ended December 31,		
	2018	2017	2016
Tax at the statutory rate	\$ (28,027)	\$ 14,334	\$ 28,233
Goodwill impairment	40,966	—	—
Federal rate change	—	(70,055)	—
State and local taxes, net of federal income tax impact	4,433	(1,201)	3,046
Federal credits and net operating losses	(10,889)	(3,158)	(2,850)
Stock compensation	712	2,207	—
Other, net ¹	3,110	1,488	2,683
Income tax provision (benefit)	\$ 10,305	\$ (56,385)	\$ 31,112

¹ Includes \$2.9 million of expense associated with the write-off of goodwill as part of our divestiture discussed in Note 4, "Asset Divestiture" for the year ended December 31, 2018.

During 2018, the valuation allowance for deferred tax assets remained comparable to the prior year. In 2017, the valuation allowance for deferred tax assets decreased by \$0.7 million compared to 2016.

In March 2016 the FASB issued ASU 2016-09, *Improvements to Employee Share Based Payment Accounting*. We adopted the standard during the first quarter of 2017. The standard requires all excess tax benefits and deficiencies to be recognized as income tax expense or benefit discretely in the reporting period in which they occur. During 2018 and 2017, we recognized tax expense of \$0.7 million and \$2.2 million, respectively, for stock based compensation.

We use the flow-through method to account for investment tax credits earned on eligible expenditures. Under this method, the investment tax credits are recognized as a reduction to income tax expense in the year they are earned. During 2018 and 2017, we recognized a benefit of \$10.0 million and \$2.4 million, respectively, related to energy investment tax credits.

The tax effects of significant temporary differences creating deferred tax assets and liabilities at December 31 were:

(In thousands)	2018	2017
Deferred tax assets:		
Employee benefits	\$ 4,202	\$ 3,940
Postretirement employee benefits	15,850	17,132
Incentive compensation	4,338	5,194
Inventories	6,227	7,959
Pensions	7,380	2,516
State credit carryforwards	10,705	11,752
State net operating losses	1,987	3,088
Other	5,562	1,949
Total deferred tax assets	\$ 56,251	\$ 53,530
Valuation allowance	(3,764)	(3,733)
Deferred tax assets, net of valuation allowance	\$ 52,487	\$ 49,797
Deferred tax liabilities:		
Plant and equipment	\$ (161,832)	\$ (153,885)
Intangible assets	(5,643)	(7,577)
Total deferred tax liabilities	(167,475)	(161,462)
Net deferred tax liabilities	\$ (114,988)	\$ (111,665)

Net deferred tax assets (liabilities) consist of:

(In thousands)	2018	2017
Non-current deferred tax assets ¹	\$ 6,194	\$ 6,863
Non-current deferred tax liabilities	(121,182)	(118,528)
Net non-current deferred tax liabilities	(114,988)	(111,665)
Net deferred tax liabilities	\$ (114,988)	\$ (111,665)

¹ Included in "Other assets, net" on our accompanying December 31, 2018 and 2017 Consolidated Balance Sheets.

Changes in tax laws and rates may affect recorded deferred tax assets and liabilities and our effective tax rate in the future. On December 22, 2017, the United States government enacted the Tax Cuts and Jobs Act which significantly impacted our financial statements. For the year ended December 31, 2017, we recorded a tax benefit for the impact of the Act of approximately \$70 million which represents the remeasurement of our net deferred tax liabilities.

We have net investment tax credits associated with state jurisdictions totaling \$8.9 million, which expire between 2019 and 2037.

The following presents a roll forward of our unrecognized tax benefits and associated interest and penalties, \$2.8 million of which is included in the "Accrued taxes" line item in non-current liabilities in our Consolidated Balance Sheets. The remaining \$0.6 million consists of certain tax attributes that are uncertain.

(In thousands)	Gross Unrecognized Tax Benefits, Excluding Interest and Penalties	Interest and Penalties	Total Gross Unrecognized Tax Benefits
Balance at December 31, 2016	\$ 4,903	\$ 237	\$ 5,140
Change in prior year tax positions	(1,149)	48	(1,101)
Change in current year tax positions	320	—	320
Balance at December 31, 2017	\$ 4,074	\$ 285	\$ 4,359
Change in prior year tax positions	(560)	61	(499)
Reductions as a result of a lapse of the applicable statute of limitations	(645)	(56)	(701)
Change in current year tax positions	280	—	280
Balance at December 31, 2018	\$ 3,149	\$ 290	\$ 3,439

Unrecognized tax benefits net of related deferred tax assets at December 31, 2018, if recognized, would favorably impact our effective tax rate by decreasing our tax provision by \$2.8 million. For each of the years ended December 31, 2017 and 2016, if recognized, the balance of unrecognized tax benefits would favorably impact our effective tax rate by \$3.6 million and \$4.1 million, respectively. We reflect accrued interest related to tax obligations, as well as penalties, in our provision for income taxes. For each of the years ended December 31, 2018, 2017, and 2016, we accrued interest of less than \$0.1 million each year in our income tax provision. We recorded no penalties in the years ended December 31, 2018, 2017, and 2016.

The company has certain state benefits related to filing positions taken which have not been recognized on the balance sheet. Although the uncertain tax position was not reflected in the balance sheet as a recorded liability, it is disclosed in the tabular roll forward for unrecognized tax benefits.

We have operations in many states within the U.S. and are subject, at times, to tax audits in these jurisdictions. With a few exceptions, we are no longer subject to U.S. federal, state and local, or foreign income tax examinations by tax authorities for years prior to 2015. We expect that the outcome of any examination will not have a material effect on our consolidated financial statements. Although the timing of resolution of audits is not certain, we evaluate all audit issues in the aggregate, along with the expiration of applicable statutes of limitations, and estimate that it is reasonably possible the total gross unrecognized tax benefits could decrease by approximately \$0.7 million within the next 12 months.

NOTE 9 Accounts Payable and Accrued Liabilities

(In thousands)	December 31,	
	2018	2017
Trade accounts payable	\$ 228,059	\$ 169,293
Accrued wages, salaries and employee benefits	41,426	41,979
Accrued interest	14,672	12,723
Accrued discounts and allowances	8,143	7,283
Accrued taxes other than income taxes payable	6,243	6,907
Accrued utilities	6,934	6,759
Other	15,555	11,677
	\$ 321,032	\$ 256,621

NOTE 10 Debt

\$300 MILLION SENIOR NOTES DUE 2025

On July 29, 2014 we issued \$300 million aggregate principal amount of senior notes, which we refer to as the 2014 Notes. The 2014 Notes mature on February 1, 2025, have an interest rate of 5.375% and were issued at their face value. The issuance of these notes generated net proceeds of approximately \$298 million after deducting offering expenses.

The 2014 Notes are guaranteed by all of our direct and indirect domestic subsidiaries. The 2014 Notes will also be guaranteed by each of our future direct and indirect domestic subsidiaries that do not constitute an immaterial subsidiary under the indenture governing the 2014 Notes. The 2014 Notes are equal in right of payment with all other existing and future unsecured senior indebtedness and are senior in right of payment to any future subordinated indebtedness. The 2014 Notes are effectively subordinated to all of our existing and future secured indebtedness, including borrowings under our secured revolving credit facilities, which are secured by certain of our accounts receivable, inventory and cash. The terms of the 2014 Notes limit our ability and the ability of any restricted subsidiaries to incur certain liens, engage in sale and leaseback transactions and consolidate, merge with, or convey, transfer or lease substantially all of our or their assets to another person.

We may, on any one or more occasions, redeem all or a part of the 2014 Notes, upon not less than 30 days nor more than 60 days' notice, at a redemption price equal to 100% of the principal amount of the 2014 Notes redeemed, plus the applicable premium as of, and accrued and unpaid interest, if any, to the date of redemption. Unless we default in the payment of the redemption price, interest will cease to accrue on the 2014 Notes or portions thereof called for redemption on the applicable redemption date. In addition, we may be required to make an offer to purchase the 2014 Notes upon the sale of certain assets and upon a change of control.

\$275 MILLION SENIOR NOTES DUE 2023

We issued \$275 million aggregate principal amount of senior notes on January 23, 2013, which we refer to as the 2013 Notes. The 2013 Notes mature on February 1, 2023, have an interest rate of 4.5% and were issued at their face value. The issuance of these notes generated net proceeds of approximately \$271 million after deducting offering expenses.

The 2013 Notes are guaranteed by all of our direct and indirect domestic subsidiaries. The 2013 Notes will also be guaranteed by each of our future direct and indirect domestic subsidiaries that we do not designate as an unrestricted subsidiary under the indenture governing the 2013 Notes. The 2013 Notes are equal in right of payment with all other existing and future unsecured senior indebtedness and are senior in right of payment to any future subordinated indebtedness. The 2013 Notes are effectively subordinated to all of our existing and future secured indebtedness, including borrowings under our secured revolving credit facilities, which are secured by certain of our accounts receivable, inventory and cash. The terms of the 2013 Notes limit our ability and the ability of any restricted subsidiaries to borrow money; pay dividends; redeem or repurchase capital stock; make investments; sell assets; create restrictions on the payment of dividends or other amounts to us from any restricted subsidiaries; enter into transactions with affiliates; enter into sale and lease back transactions; create liens; and consolidate, merge or sell all or substantially all of our assets.

We may redeem all or a portion of the 2013 Notes at specified redemption prices plus accrued and unpaid interest. In addition, we may be required to make an offer to purchase the 2013 Notes upon the sale of certain assets and upon a change of control.

REVOLVING CREDIT FACILITIES

After giving effect to a revolving commitment increase described below, our senior secured revolving credit facilities provide in the aggregate, on a combined basis, for the extension of up to \$400 million in revolving loans under: (i) a \$200 million credit agreement with Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto (the "Commercial Credit Agreement"); and (ii) a \$200 million credit agreement with Northwest Farm Credit Services, PCA, as administrative agent, and the lenders party thereto (the "Farm Credit Agreement"). These revolving credit facilities were initially entered into on October 31, 2016 and we refer to them collectively as the "Credit Agreements." In August 2018, we entered into an agreement with a lender to the Farm Credit Agreement to provide an incremental revolving loan commitment, which increased the size of the Farm Credit Agreement from \$100 million to \$200 million. The revolving credit facilities provided under the Credit Agreements mature on October 31, 2021.

We may separately request incremental commitments under either Credit Agreement to increase the amount of revolving loans or to provide term loans under such Credit Agreement. After obtaining the \$100 million incremental revolving commitment to the Farm Credit Agreement in August 2018, the aggregate amount of incremental commitments we may request may not exceed \$100 million (on a combined basis under both Credit Agreements), plus an additional amount, not to exceed \$100 million (also on a combined basis under both Credit Agreements), such that our first lien leverage ratio on a pro forma basis, as defined, does not exceed 3.00 to 1.00, subject to certain customary conditions and receipt of commitments by existing or additional lenders. In addition, after giving effect to the amount of any incremental borrowing under the Farm Credit Agreement, the principal amount of all unfunded revolving loan commitments and the outstanding amount of any term loans provided under the Farm Credit Agreement (if any) cannot exceed 50% of the sum of the outstanding principal amount of the loans and unfunded commitments under the Farm Credit Agreement and the Commercial Credit Agreement on a combined basis.

Revolving Loans borrowed under the Credit Agreements bear interest, at our option, at a LIBOR rate, a base rate, or, in the case of the Farm Credit Agreement, a one-, two-, three-, four-, or five-year fixed rate, plus, in each case, an applicable margin. Prior to an amendment to each Credit Agreement in November 2018, the per annum margin applicable to LIBOR rate loans could range from 1.25% to 2.00% under the Commercial Credit Agreement, and from 1.50% to 2.25% under the Farm Credit Agreement, in each case, depending on changes to our consolidated leverage ratio. Following the amendment in November 2018, the per annum margin applicable to LIBOR rate loans can now range from 1.25% to 2.50% under the Commercial Credit Agreement, and from 1.50% to 3.50% under the Farm Credit Agreement. The margin applicable to fixed rate loans under the Farm Credit Agreement is the same as the margin applicable to LIBOR rate loans under the Farm Credit Agreement. The margin applicable to base rate loans under both Credit Agreements is always 1.00% per annum less than the corresponding margin for LIBOR rate loans. We also pay commitment fees on the unused portion of the revolving loan commitments under the Credit Agreements, which range from 0.20% per annum to 0.40% per annum, depending on changes to our consolidated leverage ratio. Prior to the November 2018 amendment, this commitment fee could not exceed 0.35% per annum.

The Credit Agreements are secured by substantially all of the personal property of the Company and its domestic subsidiaries through separate liens granted under each Credit Agreement for the benefit of each secured party thereunder on an equal and ratable basis. The Company's obligations under the Credit Agreements are guaranteed by the Company's domestic subsidiaries.

The Credit Agreements contain various loan covenants that restrict the ability of the Company and its subsidiaries to take certain actions, including, incurrence of indebtedness, creation of liens, mergers or consolidations, dispositions of assets, repurchase or redemption of capital stock, making certain investments, entering into certain transactions with affiliates or changing the nature of their business. In addition, the Credit Agreements contain financial covenants that require the Company to maintain a consolidated secured leverage ratio in an amount not to exceed 2.00 to 1.00 in 2019, and 1.50 to 1.00 thereafter, a consolidated interest coverage ratio in an amount not less than 1.25 to 1.00, and a consolidated asset coverage ratio of not less than 1.00 to 1.00.

Each Credit Agreement also contains customary events of default, including failure to make payments under such Credit Agreement, breach of any representation or warranty or covenant under such Credit Agreement, default under or acceleration of other indebtedness for borrowed money in excess of an agreed amount, any change in control of the Company based upon a third party acquiring more than 35% of the equity interests of the Company, bankruptcy events, invalidity of such credit agreement, the incurrence of certain liabilities, termination events or withdrawals from specified benefit plans, and unpaid or uninsured judgments in excess of an agreed amount.

We are members of the Northwest Farm Credit Services, PCA system which entitles us to patronage refunds and other distributions on account of our equity interests in the Northwest Farm Credit Services, PCA, as well as our patronage with Northwest Farm Credit Services. Patronage refunds are distributions of profits from member banks in the United States Farm Credit System, like Northwest Farm Credit Services, which are cooperatives (member owned) that distribute profits to their members in the form of patronage dividends, which are accrued as earned and recorded as offsets to interest expense under the Farm Credit Agreement.

As of December 31, 2018, there was an aggregate of \$200.0 million of borrowings outstanding under the Credit Agreements and we were in compliance with the covenants contained in the Credit Agreements. In addition, \$7.6 million of the credit facilities was being used to support outstanding standby letters of credit. The borrowings outstanding under the Credit Agreements as of December 31, 2018, consisted of a combination of short-term base and LIBOR rate loans, which are classified as current liabilities in our Consolidated Balance Sheet, and a \$100.0 million three-year borrowing under the Farm Credit Agreement that is included in "Long-term debt," in our Consolidated Balance Sheet. As of December 31, 2018, we would have been permitted to draw an additional \$192.4 million of revolving loans under the Credit Agreements.

NOTE 11 Other Long-Term Obligations

(In thousands)	December 31,	
	2018	2017
Long-term lease obligations, net of current portion	\$ 27,419	\$ 26,460
Deferred proceeds	4,511	5,576
Deferred compensation	2,585	5,023
Other	4,462	6,216
	\$ 38,977	\$ 43,275

NOTE 12 Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss at the balance sheet dates is comprised of the following:

(In thousands)	Pension and Other Post Retirement Employee Benefit Plan Adjustments
Balance at December 31, 2016 ²	\$ (51,753)
Other comprehensive income before reclassifications	6,745
Amounts reclassified from accumulated other comprehensive loss	1,025
Other comprehensive income, net of tax ¹	7,770
Balance at December 31, 2017	\$ (43,983)
Other comprehensive loss before reclassifications	(16,036)
Amounts reclassified from accumulated other comprehensive loss	5,523
Other comprehensive loss, net of tax ¹	(10,513)
Reclassification of the income tax effects of the Tax Cuts and Jobs Act	(12,852)
Balance at December 31, 2018	\$ (67,348)

¹ For the year ended December 31, 2018, net periodic costs associated with our pension and other postretirement employee benefit, or OPEB, plans included in other comprehensive loss and reclassified from accumulated other comprehensive loss, or AOCL, included \$21.8 million of net loss on plan assets, \$9.2 million of actuarial loss amortization, and \$1.7 million of prior service credit amortization, less total tax of \$3.8 million. For the year ended December 31, 2017, net periodic costs associated with our pension and OPEB plans included in other comprehensive income and reclassified from AOCL included \$9.2 million of net gain on plan assets, \$3.3 million of actuarial loss amortization, and \$1.5 million of prior service credit amortization, less total tax of \$3.1 million. These accumulated other comprehensive loss components are included in the computation of net periodic pension and OPEB costs in Note 13, "Savings, Pension and Other Postretirement Employee Benefit Plans."

² Included in the balance at December 31, 2016 is settlement expense of \$3.5 million associated with the remeasurement of our salaried pension plan, which is discussed further in Note 13, "Savings, Pension and Other Postretirement Employee Benefit Plans." The settlement expense is net of tax totaling \$1.4 million.

NOTE 13 Savings, Pension and Other Postretirement Employee Benefit Plans

Certain of our employees are eligible to participate in defined contribution savings and defined benefit postretirement plans. These include 401(k) savings plans, defined benefit pension plans including company-sponsored and multiemployer plans, and other postretirement employee benefit, or OPEB, plans, each of which is discussed below.

401(k) Savings Plans

Substantially all of our employees are eligible to participate in 401(k) savings plans, which include a company match component. In 2018, 2017 and 2016 we made 401(k) contributions on behalf of employees of \$17.2 million, \$16.6 million, and \$16.9 million, respectively.

Company-Sponsored Defined Benefit Pension Plans

A majority of our salaried employees and a portion of our hourly employees are covered by company-sponsored noncontributory defined benefit pension plans. During 2016, we announced a voluntary, limited-time opportunity for former employees who are vested participants in certain of our qualified pension plans to request early payment of their entire pension plan benefit in the form of a single lump sum payment. The amount of total payments under this program totaled approximately \$10.6 million for salaried employees and \$4.8 million for hourly employees and were made from the applicable plan's trust assets during the third quarter of 2016. Based on the level of payments made, settlement accounting rules applied to our salaried pension plan and resulted in a remeasurement of that plan as of August 31, 2016 and the recognition of \$3.5 million in settlement expense in 2016.

Company-Sponsored OPEB Plans

We also provide retiree health care and life insurance plans, which cover certain salaried and hourly employees. Retiree health care benefits for Medicare eligible participants over the age of 65 are provided through Health Reimbursement Accounts, or HRA's. Benefits for retirees under the age of 65 are provided under our company-sponsored health care plans, which require retiree contributions and contain other cost-sharing features. The retiree life insurance plans are primarily noncontributory.

Funded Status of Company-Sponsored Plans

As required by current standards governing the accounting for defined benefit pension and other postretirement benefit plans, we recognized the funded status of our company-sponsored plans on our Consolidated Balance Sheets at December 31, 2018 and 2017. The funded status is measured as the difference between plan assets at fair value (with limited exceptions) and the benefit obligation. For a pension plan, the benefit obligation is the projected benefit obligation; for any other postretirement employee benefit plan, such as a retiree health care plan, the benefit obligation is the accumulated postretirement employee benefit obligation. We use a December 31 measurement date for our benefit plans.

The changes in benefit obligation, plan assets and funded status for company-sponsored benefit plans as of December 31 are as follows:

(In thousands)	Pension Benefit Plans		Other Postretirement Employee Benefit Plans	
	2018	2017	2018	2017
Benefit obligation at beginning of year	\$ 317,814	\$ 304,388	\$ 65,128	\$ 69,163
Service cost	1,789	2,069	136	163
Interest cost	12,020	13,149	2,435	2,745
Actuarial (gains) losses	(16,356)	19,130	(367)	(1,254)
Benefits paid	(21,101)	(20,922)	(7,000)	(5,689)
Benefit obligation at end of year	294,166	317,814	60,332	65,128
Fair value of plan assets at beginning of year	310,966	285,638	20	20
Actual return on plan assets	(21,474)	45,796	—	—
Employer contribution	466	454	7,000	5,689
Benefits paid	(21,101)	(20,922)	(7,000)	(5,689)
Fair value of plan assets at end of year	268,857	310,966	20	20
Funded status at end of year	\$ (25,309)	\$ (6,848)	\$ (60,312)	\$ (65,108)

The December 31, 2018 pension funded status was affected by unfavorable asset returns, partially offset by an increase in the discount rate. The December 31, 2018 OPEB benefit obligation decreased as of December 31, 2018 due to an increase in the discount rate and the continued payment of benefits.

Amounts recognized in the Consolidated Balance Sheets:

(In thousands)	Pension Benefit Plans		Other Postretirement Employee Benefit Plans	
	2018	2017	2018	2017
Non-current assets	\$ —	\$ 8,144	\$ —	\$ —
Current liabilities	(441)	(441)	(6,989)	(7,190)
Non-current liabilities	(24,868)	(14,551)	(53,323)	(57,918)
Net amount recognized	\$ (25,309)	\$ (6,848)	\$ (60,312)	\$ (65,108)

Pre-tax amounts recognized in Accumulated Other Comprehensive Loss as of December 31 consist of:

(In thousands)	Pension Benefit Plans		Other Postretirement Employee Benefit Plans	
	2018	2017	2018	2017
Net loss (gain)	\$ 111,927	\$ 99,865	\$ (15,006)	\$ (15,541)
Prior service cost (credit)	—	—	—	(1,676)
Net amount recognized	\$ 111,927	\$ 99,865	\$ (15,006)	\$ (17,217)

Information as of December 31 for certain pension plans included above with accumulated benefit obligations in excess of plan assets were as follows:

(In thousands)	2018	2017
Projected benefit obligation	\$ 294,166	\$ 178,452
Accumulated benefit obligation	294,166	178,452
Fair value of plan assets	268,857	163,460

The primary reason for the large increase in the accumulated benefit obligation in 2018 was due to the hourly pension plan changing from an overfunded status at December 31, 2017 to an underfunded status at December 31, 2018.

Pre-tax components of net periodic cost and other amounts recognized in Other Comprehensive Income (Loss) for the years ended December 31 were as follows:

Net Periodic Cost:

(In thousands)	Pension Benefit Plans			Other Postretirement Employee Benefit Plans		
	2018	2017	2016	2018	2017	2016
Service cost	\$ 1,789	\$ 2,069	\$ 1,562	\$ 136	\$ 163	\$ 249
Interest cost	12,020	13,149	14,072	2,435	2,745	3,075
Expected return on plan assets	(17,002)	(18,765)	(19,389)	—	(1)	(1)
Amortization of prior service cost (credit)	—	8	22	(1,676)	(1,535)	(1,712)
Amortization of actuarial loss (gain)	10,058	9,874	11,463	(902)	(6,618)	(7,566)
Settlement	—	—	3,482	—	—	—
Net periodic cost (income)	\$ 6,865	\$ 6,335	\$ 11,212	\$ (7)	\$ (5,246)	\$ (5,955)

Other amounts recognized in Other Comprehensive Income (Loss) before tax:

(In thousands)	Pension Benefit Plans			Other Postretirement Employee Benefit Plans		
	2018	2017	2016	2018	2017	2016
Net loss (gain)	\$ 22,120	\$ (7,901)	\$ (1,445)	\$ (367)	\$ (1,253)	\$ 818
Curtailments	—	—	—	—	—	—
Prior service credit	—	—	—	—	—	—
Amortization of prior service (cost) credit	—	(8)	(22)	1,676	1,535	1,712
Amortization of actuarial (loss) gain	(10,058)	(9,874)	(11,463)	902	6,618	7,566
Settlement	—	—	(3,482)	—	—	—
Total recognized in other comprehensive loss (income)	\$ 12,062	\$ (17,783)	\$ (16,412)	\$ 2,211	\$ 6,900	\$ 10,096
Total recognized in net periodic cost and other comprehensive (income) loss	\$ 18,927	\$ (11,448)	\$ (5,200)	\$ 2,203	\$ 1,654	\$ 4,141

The estimated net loss for the defined benefit pension plans that will be amortized from accumulated other comprehensive loss into net periodic cost (benefit) over the next fiscal year is \$7.6 million. The estimated net gain for the OPEB plans that will be amortized from accumulated other comprehensive loss into net periodic cost (benefit) over the next fiscal year is \$0.9 million.

During 2018, \$1.2 million of net periodic pension and OPEB costs were charged to "Cost of sales," \$0.8 million were charged to "Selling, general and administrative expenses," and \$4.9 million of costs were charged to "Non-operating pension and other postretirement benefit (costs) income" in the accompanying Consolidated Statements of Operations, as compared to costs of \$1.3 million, \$0.9 million, and income of \$1.1 million, respectively, during 2017 and costs of \$1.1 million, \$0.7 million, and \$3.5 million, respectively, during 2016.

Weighted average assumptions used to determine the benefit obligation as of December 31 were:

	Pension Benefit Plans			Other Postretirement Employee Benefit Plans		
	2018	2017	2016	2018	2017	2016
Discount rate	4.40%	3.90%	4.45%	4.55%	3.95%	4.30%

Weighted average assumptions used to determine the net periodic cost for the years ended December 31 were:

	Pension Benefit Plans			Other Postretirement Employee Benefit Plans		
	2018	2017	2016	2018	2017	2016
Discount rate	3.90%	4.45%	4.70%	3.95%	4.30%	4.50%
Expected return on plan assets	6.00	6.75	6.75	—	—	—

The discount rate used in the determination of pension benefit obligations and pension expense was determined based on a review of long-term high-grade bonds as well as management's expectations. The discount rate used to calculate OPEB obligations was determined using the same methodology we used for our pension plans.

The expected return on plan assets assumption is based upon an analysis of historical long-term returns for various investment categories, as measured by appropriate indices. These indices are weighted based upon the extent to which plan assets are invested in the particular categories in arriving at our determination of a composite expected return.

The assumed health care cost trend rate used to calculate 2018 OPEB income was 6.90% in 2018, grading to 4.00% over approximately 70 years, for participants whose benefits are not provided through Health Reimbursement Accounts (HRAs), and 2.50% annually for participants whose benefits are provided through HRAs. The health care cost trend rate used to calculate December 31, 2018 OPEB obligations was 6.00% in 2019, grading to 4.00% over approximately 70 years, for participants whose benefits are not provided through HRAs, and 2.50% annually for participants whose benefits are provided through HRAs. This assumption has a significant effect on the amounts reported. A one percentage point change in the health care cost trend rates would have the following effects:

(In thousands)	1% Increase	1% Decrease
Effect on total of service and interest cost components	\$ 172	\$ (149)
Effect on postretirement employee benefit obligation	3,749	(3,279)

The investments of our defined benefit pension plans are held in a Master Trust. The assets of our OPEB plans are held within an Internal Revenue Code section 401(h) account for the payment of retiree medical benefits within the Master Trust.

Current accounting rules governing fair value measurement establish a framework for measuring fair value, which provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). The three levels of the fair value hierarchy are described below:

- Level 1 Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the plans have the ability to access.
- Level 2 Inputs to the valuation methodology include:
 - Quoted prices for similar assets or liabilities in active markets;
 - Quoted prices for identical or similar assets or liabilities in inactive markets;
 - Inputs other than quoted prices that are observable for the asset or liability; and
 - Inputs that are derived principally from or corroborated by observable market data by correlation or other means

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.
- Level 3 Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

There have been no changes in the methodologies used during 2018 and 2017. Investments in common and collective trust funds are generally valued based on their respective net asset value, or NAV, (or its equivalent), as a practical expedient to estimate fair value due to the absence of a readily determinable fair value. Investments that may be fully redeemed at NAV in the near-term are disclosed in the table below as "Investments measured at net asset value" in accordance with Accounting Standards Codification 820 - Fair Value Measurements and Disclosures.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while management believes the valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables set forth by level, within the fair value hierarchy, the investments at fair value for our company-sponsored pension benefit plans:

(In thousands)	December 31, 2018		
	Level 1	Investments measured at net asset value	Total
Cash and cash equivalents	\$ 2,004	\$ —	\$ 2,004
Common and collective trust:			
Collective investment funds	—	266,853	266,853
Total investments at fair value	\$ 2,004	\$ 266,853	\$ 268,857

(In thousands)	December 31, 2017		
	Level 1	Investments measured at net asset value	Total
Cash and cash equivalents	\$ 2,010	\$ —	\$ 2,010
Common and collective trusts:			
Collective investment funds	—	308,956	308,956
Total investments at fair value	\$ 2,010	\$ 308,956	\$ 310,966

Our OPEB plan had approximately \$20,000 held in cash and cash equivalents at December 31, 2018 and 2017, which were categorized as level 1.

We have formal investment policy guidelines for our company-sponsored plans. These guidelines were set by our Benefits Committee, which is comprised of members of our management and has been assigned its fiduciary authority over management of the plan assets by our Board of Directors. The Committee's duties include periodically reviewing and modifying those investment policy guidelines as necessary and ensuring that the policy is adhered to and the investment objectives are met.

The investment policy includes guidelines for specific categories of equity and fixed income securities. Assets are managed by professional investment managers who are expected to achieve a reasonable rate of return over a market cycle. Long-term performance is a fundamental tenet of the policy.

The general policy states that plan assets would be invested to seek the greatest return consistent with the fiduciary character of the pension funds and to allow the plans to meet the need for timely pension benefit payments. The specific investment guidelines stipulate that management is to maintain adequate liquidity for meeting expected benefit payments by reviewing, on a timely basis, contribution and benefit payment levels and appropriately revising long-term and short-term asset allocations. Management takes reasonable and prudent steps to preserve the value of pension fund assets, avoid the risk of large losses and also attempt to preserve the funded status of the plans. Major steps taken to provide this protection included:

- Assets are diversified among various asset classes, such as domestic equities, international equities, fixed income and cash. The long-term asset allocation ranges are as follows:

Domestic equities	10%-18%
International equities, including emerging markets	10%-18%
Corporate/Government bonds	68%-78%
Liquid reserves	0%-5%

Periodically, reviews of allocations within these ranges are made to determine what adjustments should be made based on changing economic and market conditions and specific liquidity requirements.

- Assets were managed by professional investment managers and could be invested in separately managed accounts or commingled funds.
- Assets were not invested in securities rated below BBB- by S&P or Baa3 by Moody's.

The investment guidelines also require that the individual investment managers are expected to achieve a reasonable rate of return over a market cycle. Emphasis is placed on long-term performance versus short-term market aberrations. Factors considered in determining reasonable rates of return include performance achieved by a diverse cross section of other investment managers, performance of commonly used benchmarks (e.g., Russell 3000 Index, MSCI World ex-U.S. Index, Barclays Capital Long Credit Index), actuarial assumptions for return on plan investments and specific performance guidelines given to individual investment managers.

As of December 31, 2018, nine active investment managers managed substantially all of the pension funds, each of whom had responsibility for managing a specific portion of these assets. Plan assets were diversified among the various asset classes within the allocation ranges approved by the Benefits Committee.

In 2018, we did not make any contributions to our qualified pension plans, and we currently do not anticipate making any cash contributions to those plans in 2019. We contributed \$0.5 million to our non-qualified pension plan in 2018. We do not anticipate funding our OPEB plans in 2019 except to pay benefit costs as incurred during the year by plan participants.

Estimated future benefit payments are as follows for the years indicated:

(In thousands)	Pension Benefit Plans	Other Postretirement Employee Benefit Plans
2019	20,700	7,010
2020	20,580	6,501
2021	20,427	5,409
2022	20,341	4,849
2023	20,312	4,496
2024-2028	98,651	18,685

Multiemployer Defined Benefit Pension Plans

Hourly employees at two of our manufacturing facilities participate in multiemployer defined benefit pension plans: the PACE Industry Union-Management Pension Fund, or PIUMPF, which is managed by United Steelworkers, or USW, Benefits; and the International Association of Machinist & Aerospace Workers National Pension Fund, or IAM NPF. We make contributions to these plans, as well as make contributions to a trust fund established to provide retiree medical benefits for a portion of these employees, which is also managed by USW Benefits. The risks of participating in these multiemployer plans are different from single-employer plans in the following respects:

- Assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers. The number of employers participating in PIUMPF fell from 135 during 2012 to 78 during 2017. We believe that we are now the employer making the largest proportion of total contributions.
- Under applicable federal law, any employer contributing to a multiemployer pension plan that completely ceases participating in the plan while it is underfunded is subject to an assessment of such employer's allocable share of the aggregate unfunded vested benefits of the plan, except when that plan is in "critical" or "critical and declining" status. In certain circumstances, an employer can also be assessed a statutory withdrawal liability for a partial withdrawal from a multiemployer pension plan. Based on information available to us as of December 31, 2018, as well as information provided by PIUMPF and reviewed by our actuarial consultant, we estimate the aggregate pre-tax liability that we would have incurred if we had completely withdrawn from PIUMPF in 2018 would have been in excess of \$78 million. However, the exact amount of potential exposure could be higher or lower than the estimate, depending on, among other things, the nature and timing of any

triggering events and the funded status of PIUMPF at that time. A withdrawal liability is recorded for accounting purposes when withdrawal is probable and the amount of the withdrawal obligation is reasonably estimable.

Our participation in these plans for the annual period ended December 31, 2018, is outlined in the table below. The "EIN" and "Plan Number" columns provide the Employee Identification Number, or EIN, and the three-digit plan number. The most recent Pension Protection Act, or PPA, zone status available in 2018 and 2017 is for a plan's year-end as of December 31, 2018 and December 31, 2017, respectively. The zone status is set under the provisions of the Multiemployer Pension Plan Reform Act of 2014 and is based on information we received from the plans and is certified by each plan's actuary. Among other factors, plans in the red zone are generally less than 65 percent funded, plans in the yellow zone are less than 80 percent but more than 65 percent funded, and plans in the green zone are at least 80 percent funded. The "FIP/RP Status Pending/Implemented" column indicates plans for which a Funding Improvement Plan, or FIP, or a Rehabilitation Plan, or RP, is either pending or has been implemented as required by the PPA as a measure to correct its underfunded status. The last column lists the expiration date(s) of the collective-bargaining agreement(s) to which the plans are subject.

In 2018, the contribution rates for the IAM NPF plan was \$4.00 per hour. In 2018, the contribution rates for PIUMPF was \$2.79 per hour. In 2015, contribution rates for PIUMPF were increased as part of the RP in lieu of the legally required surcharge, paid by the employers, to assist the fund's financial status. We were listed in PIUMPF's Form 5500 report as providing more than five percent of the total contributions for the years 2017 and 2016. At the date of issuance of our consolidated financial statements, Form 5500 reports for these plans were not available for the 2018 plan year.

Pension Fund	EIN	Plan Number	PPA Zone Status ¹		FIP/RP Status Pending/Implemented	Contributions (in thousands)			Surcharge Imposed	Expiration Date of Collective Bargaining Agreement
			2018	2017		2018	2017	2016		
IAM NPF	51-6031295	002	Green	Green	N/A	\$ 316	\$ 333	\$ 335	No	5/31/2018
PIUMPF	11-6166763	001	Red	Red	Implemented	5,386	5,815	5,679	No	8/31/2017
Total Contributions:						\$ 5,702	\$ 6,148	\$ 6,014		

¹ PIUMPF has been certified as in "Critical and Declining Status" for 2018 and 2017, under the provisions of the Multiemployer Pension Plan Reform Act of 2014.

NOTE 14 Earnings Per Share

Basic earnings (loss) per share are based on the weighted average number of shares of common stock outstanding. Diluted earnings per share are based upon the weighted average number of shares of common stock outstanding plus all potentially dilutive securities that were assumed to be converted into common shares at the beginning of the period under the treasury stock method. This method requires that the effect of potentially dilutive common stock equivalents be excluded from the calculation of diluted earnings per share for the periods in which net losses are reported because the effect is anti-dilutive.

The following table reconciles the number of common shares used in calculating the basic and diluted net earnings per share:

	December 31,		
	2018	2017	2016
Basic average common shares outstanding ¹	16,486,807	16,464,286	17,000,599
Incremental shares due to:			
Restricted stock units	—	21,522	21,668
Performance shares	—	45,252	76,525
Stock options	—	24,866	7,648
Diluted average common shares outstanding	16,486,807	16,555,926	17,106,440
Basic net (loss) earnings per common share	\$ (8.72)	\$ 5.91	\$ 2.91
Diluted net (loss) earnings per common share	(8.72)	5.88	2.90
Anti-dilutive shares excluded from calculation	929,399	499,348	220,037

¹ Basic average common shares outstanding include restricted stock awards that are fully vested, but are deferred for future issuance. See Note 15, "Equity-Based Compensation Plans" for further discussion.

NOTE 15 Equity-Based Compensation Plans

At December 31, 2018, we have two stock incentive plans in place: the Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan which became effective on December 16, 2008, and was amended and restated effective as of February 27, 2015, and the Clearwater Paper Corporation 2017 Stock Incentive Plan, which became effective February 28, 2017, collectively referred to as, the Stock Plans. Our Stock Plans have been approved by our stockholders, and provide for equity-based awards in the form of restricted shares, restricted stock units, or RSUs, performance shares, stock options or stock appreciation rights to selected employees, outside directors, and consultants of the company.

Under our Stock Plans we are authorized to issue up to approximately 6.2 million shares, which includes approximately 0.7 million additional shares authorized in connection with our acquisition of Cellu Tissue that are available for issuance as equity-based awards only to any employees, outside directors, or consultants who were not employed on December 26, 2010 by Clearwater Paper Corporation or any of its subsidiaries. At December 31, 2018, approximately 3.1 million shares were available for future issuance under the Stock Plans.

We recognize equity-based compensation expense for all equity-based payment awards made to employees and directors, including RSUs, performance shares and stock options, based on estimated fair values and net of estimates of future forfeitures. The expense is classified in "Selling, general and administrative expense" in our Consolidated Statements of Operations and is recognized on a straight-line basis over the requisite service periods of each award.

Based on the terms of the Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan, and for grants prior to 2017, employees who were retirement-eligible during the service period became fully vested in outstanding awards on the later of the date they reached retirement eligibility or at the end of the first calendar year of each respective grant. We account for this feature when determining the service period over which to recognize expense for each grant of RSUs, performance shares, and stock options. For the Clearwater Paper Corporation 2017 Stock Incentive Plan and for grants beginning in 2017, employees who are retirement-eligible during the service period become fully vested in outstanding awards on a prorated basis based on the portion of the service period for which they were employed in alignment with the terms of each respective grant type as outlined in the respective stock plan. Employees are not eligible to receive shares until the end of the applicable service period for performance shares, and the applicable vesting period for RSUs and stock options.

Employee equity-based compensation expense was recognized as follows:

(In thousands)	2018	2017	2016
Restricted stock units	\$ 2,141	\$ 1,618	\$ 1,381
Performance shares	1,125	2,283	3,311
Stock options	2,388	2,552	2,913
Total employee equity-based compensation	\$ 5,654	\$ 6,453	\$ 7,605
Related tax benefit	\$ 1,486	\$ 2,149	\$ 2,767

RESTRICTED STOCK UNITS

RSUs granted under our Stock Plans are generally subject to a vesting period of one to three years, with generally the same service period. RSU awards will accrue dividend equivalents based on dividends paid, if any, during the RSU vesting period. The dividend equivalents will be converted into additional RSUs that will vest in the same manner as the underlying RSUs to which they relate. RSUs granted under our Stock Plans do not represent common stock, and therefore the holders do not have voting rights unless and until shares are issued upon settlement.

A summary of the status of outstanding RSU awards as of December 31, 2018, 2017, and 2016, and changes during those years, is presented below:

	2018		2017		2016	
	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Unvested shares outstanding at						
January 1	94,471	\$ 50.22	54,460	\$ 47.16	46,029	\$ 60.17
Granted	111,054	37.31	66,774	56.45	44,627	39.10
Vested	(43,878)	46.36	(17,531)	62.75	(29,338)	55.16
Forfeited	(33,994)	43.30	(9,232)	53.52	(6,858)	47.80
Unvested shares outstanding at December 31	127,653	42.09	94,471	50.22	54,460	47.16
Vested shares outstanding at December 31	—	—	4,226	38.75	10,860	52.71
Deferred shares outstanding at December 31	33,663	7.31	33,663	7.31	35,438	7.21
Total shares outstanding at December 31	161,316	\$ 34.83	132,360	\$ 38.94	100,758	\$ 33.71
Aggregate intrinsic value of outstanding shares (in thousands)		\$ 3,931		\$ 6,009		\$ 6,605

During 2018, 48,104 RSU shares were settled and distributed in common stock. Of these shares, 28,971 were RSU shares that were settled and distributed in the fourth quarter of 2018. After adjusting for minimum tax withholdings, a net 34,447 shares were issued during 2018. The minimum tax withholdings payment made in 2018 in connection with issued shares was \$0.4 million.

During 2017, 25,940 RSU shares were settled and distributed, of which 20,940 shares were settled and distributed in the fourth quarter. Another 1,775 shares were RSU shares that were settled in prior years but distribution had been deferred to preserve tax deductibility for the Company in the respective years because distribution of these shares would have resulted in certain executive compensation being above the Internal Revenue Code section 162(m) threshold for those years. After adjusting for minimum tax withholdings, a net 17,834 shares were issued during 2017. The minimum tax withholdings payment made in 2017 in connection with issued shares was \$1.1 million.

The fair value of each RSU share award granted during 2018 was estimated on the date of grant using the grant date market price of our common stock. The total fair value of share awards that vested during 2018 was \$2.0 million.

As of December 31, 2018, there was \$3.5 million of total unrecognized compensation cost related to outstanding RSU awards. The cost is expected to be recognized over a weighted average period of 1.9 years.

PERFORMANCE SHARES

Performance share awards granted under our Stock Plans have a three-year performance period, with generally the same service period, and shares are issued after the end of the period if the employee provides the requisite service and the performance measure is met. As provided in the Clearwater Paper Corporation 2008 and 2017 Stock Incentive Plans, the following performance measures are used to determine the number of performance shares ultimately issuable:

- For performance shares granted in 2016 and prior years, the performance measure used was a comparison of the percentile ranking of our total stockholder return (TSR) compared to the TSR performance of a selected peer group or index.
- For performance shares granted in 2017, the performance measure used for 40% of the grant is a comparison of the percentile ranking of our TSR, compared to the TSR of a selected index, and for 60% of the performance share awards granted, a return on invested capital (ROIC) performance measure is being used to determine the number of performance shares ultimately issuable.
- For performance shares granted in 2018, the performance measure used for 40% of the performance share awards granted is an ROIC performance measure. For the remaining 60% of the grants, a free cash flow performance measure is used. The combined performance of these measures is then subject to an adjustment (increase or decrease) of up to 25% based on our TSR compared to the TSR performance of a selected index.

The TSR performance measure is considered to represent a “market condition” under authoritative accounting guidance, and thus, the market condition is considered when determining the estimate of the fair value of the performance share awards. Both the ROIC and the free cash flow measures are considered “performance conditions” under authoritative accounting guidance and include certain targets and service periods that need to be achieved to earn the award. These targets are based on internal measures. Throughout the service period we assess the probability of achieving the performance condition, and expense is recognized based upon the probable outcome.

The number of performance shares actually issued, as a percentage of the amount subject to the performance share award, could range from 0%-200%.

Performance share awards granted under our Stock Plans do not represent common stock, and therefore the holders do not have voting rights unless and until shares are issued upon settlement. During the performance period, dividend equivalents accrue based on dividends paid, if any, and are converted into additional performance shares, which vest or are forfeited in the same manner as the underlying performance shares to which they relate. Generally, if an employee terminates prior to completing the requisite service period, all or a portion of their awards are forfeited and the previously recognized compensation cost is reversed. If an employee provides the requisite service through the end of the performance period, but the performance measure is not met, following authoritative guidance for awards with a market condition, previously recognized compensation cost is not reversed.

A summary of the status of outstanding performance share awards as of December 31, 2018, 2017, and 2016, and changes during those years, is presented below:

	2018		2017		2016	
	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Outstanding share awards at January 1	117,252	\$ 45.10	175,683	\$ 62.26	92,563	\$ 84.18
Granted	49,040	37.45	33,907	58.58	93,397	39.70
Settled	(73,243)	39.70	(87,491)	84.65	—	—
Forfeited	(14,619)	45.12	(4,847)	47.61	(10,277)	54.55
Outstanding share awards at December 31	78,430	45.36	117,252	45.10	175,683	62.26
Aggregate intrinsic value (in thousands)		\$ 1,911		\$ 5,323		\$ 11,516

On December 31, 2018, the three-year performance period for 73,243 performance shares granted in 2016 ended. The requisite market condition performance measure was not met, and as such no shares were paid or issued under those awards.

On December 31, 2017, the service and performance period for 41,538 outstanding shares granted in 2015 ended. The requisite market condition performance measure was not met, and as such no shares were paid or issued under those awards.

As of December 31, 2018, there was \$1.8 million of unrecognized compensation cost related to outstanding performance share awards. The cost is expected to be recognized over a weighted average period of 1.6 years.

STOCK OPTIONS

Beginning in 2014, stock options were granted to certain employees under our Stock Plans. The stock options are generally subject to a vesting period of one to three years, with generally the same service period. Upon vesting, the holder is entitled to purchase a specified number of shares of Clearwater Paper common stock at a price per share equal to the closing market price of Clearwater Paper common stock on the date of grant. Once options have vested they are exercisable. The options are exercisable for 10 years from the date of grant.

Stock options granted under our Stock Plans do not represent common stock, and therefore the holders do not have voting rights unless and until shares have been issued to the employee.

The fair value of stock option awards was determined using a Black-Scholes option-pricing model. The Black-Scholes model utilizes a range of assumptions related to dividend yield, volatility, risk-free interest rate and employee exercise behavior. Expected volatility is based on Clearwater Paper's historical stock prices. The risk-free interest rate is based on constant maturity treasury rates with maturities matching the options' expected life on the grant date. The expected life, estimated in accordance with Securities and Exchange Commission Staff Accounting Bulletin 110, is the approximate mid-point between the expected vesting time and the remaining contractual life.

Volatility	35%
Risk-free interest rate	2.74%
Expected life-years	6.0

A summary of the status of outstanding stock option awards as of December 31, 2018, and changes during the year, is presented below:

	Shares	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding options at December 31, 2015	277,693	\$ 64.47			\$ —
Granted	280,191	38.86	\$ 14.42		
Forfeited	(30,830)	47.79			
Outstanding options at December 31, 2016	527,054	\$ 51.83		8.2	\$ 7,232
Granted	158,484	56.45	18.82		
Forfeited	(22,306)	50.74			
Expired	(5,913)	66.97			
Outstanding options at December 31, 2017	657,319	\$ 52.84		7.4	\$ —
Granted	198,426	37.39	14.51		
Forfeited	(69,557)	43.18			
Expired	(24,254)	62.74			
Outstanding options at December 31, 2018	761,934	\$ 49.38		6.2	\$ —
Outstanding and exercisable options at December 31, 2018	273,776	\$ 63.40		5.8	\$ —

As of December 31, 2018, there was \$2.7 million of unrecognized compensation cost related to non-vested stock options. The cost is expected to be recognized over a weighted average period of 2.3 years.

During 2018, 261,196 stock option awards vested with a weighted average exercise price of \$41.62 and total fair value of \$10.9 million. These options are outstanding at December 31, 2018 and became exercisable on January 1, 2019. The weighted average remaining contractual term of options that vested during the year is 6.3 years.

DIRECTOR AWARDS

In connection with joining our Board of Directors, in January 2009 our outside directors at that time were granted an award of phantom common stock units, which were credited to an account established on behalf of each director and vested ratably over a three-year period with the final vesting in January 2012. Subsequent equity awards have been granted annually in May, or on a pro-rata basis as applicable, to our outside directors in the form of phantom common stock units as part of their annual compensation, which are credited to their accounts. These awards vest ratably over a one-year period. These accounts will be credited with additional phantom common stock units equal in value to dividends paid, if any, on the same amount of common stock. Upon separation from service as a director, the vested portion of the phantom common stock units held by the director in a stock unit account are converted to cash based upon the then market price of the common stock and paid to the director.

Due to its cash-settlement feature, we account for these awards as liabilities rather than equity and recognize the equity-based compensation expense or income at the end of each reporting period based on the portion of the award that is vested and the increase or decrease in the value of our common stock.

We recorded director equity-based compensation benefit totaling \$2.3 million and \$2.8 million for the years ended December 31, 2018 and 2017, respectively, and compensation expense totaling \$4.8 million for the year ended December 31, 2016.

At December 31, 2018, the liability amounts associated with director equity-based compensation included in "Other long-term obligations" and "Accounts payable and accrued liabilities" on our Consolidated Balance Sheet were \$0.8 million and \$1.3 million, respectively. At December 31, 2017, the liability amounts associated with director equity-based compensation in "Other long-term obligations" and "Accounts payable and accrued liabilities" on our Consolidated Balance Sheet were \$3.6 million and \$2.4 million, respectively.

NOTE 16 Fair Value Measurements

The estimated fair values of our financial instruments as of our balance sheet dates are presented below:

(In thousands)	December 31,			
	2018		2017	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cash, cash equivalents and restricted cash (Level 1)	\$ 24,947	\$ 24,947	\$ 16,738	\$ 16,738
Short-term borrowings under revolving credit facilities (Level 2)	100,000	99,909	155,000	154,882
Other short-term debt (Level 1)	20,833	20,833	—	—
Long-term debt (Level 2)	675,000	612,546	575,000	569,250

Accounting guidance establishes a framework for measuring the fair value of financial instruments, providing a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities, or "Level 1" measurements, followed by quoted prices of similar assets or observable market data considering the assets' underlying maturities, or "Level 2" measurements, and the lowest priority to unobservable inputs, or "Level 3" measurements.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used should seek to maximize the use of observable inputs and minimize the use of unobservable inputs.

Cash and cash equivalents, borrowings under the revolving credit facilities and long-term debt are the only items measured at fair value on a recurring basis.

We do not have any financial assets measured at fair value on a nonrecurring basis. Nonfinancial assets measured at fair value on a nonrecurring basis include items such as long-lived assets held and used that are measured at fair value resulting from impairment, if deemed necessary.

NOTE 17 Commitments and Contingencies

LEASE COMMITMENTS

Our operating leases cover manufacturing, office, warehouse and distribution space, paperboard sheeting facilities, equipment and vehicles, which expire at various dates through 2029. We have capital leases related to our North Carolina converting and manufacturing facilities as well as various office equipment. As leases expire, it can be expected that, in the normal course of business, certain leases will be renewed or replaced.

As of December 31, 2018, under current operating and capital lease contracts, we had future minimum lease payments as follows:

(In thousands)	Capital	Operating
2019	\$ 3,093	\$ 12,038
2020	3,062	11,421
2021	3,112	10,424
2022	3,019	9,489
2023	2,789	7,163
Thereafter	21,710	24,276
Total future minimum lease payments	\$ 36,785	\$ 74,811
Less interest portion	(13,887)	
Present value of future minimum lease payments	\$ 22,898	

Rent expense for operating leases was \$11.0 million, \$12.6 million and \$14.3 million for the years ended December 31, 2018, 2017 and 2016, respectively.

NOTE 18 Business Interruption and Insurance Recovery

On October 24, 2018, our Lewiston, Idaho pulp and paperboard mill had a shaft break, causing an incorrect chemical mixture in a chip impregnation vessel that resulted in the vessel plugging and subsequently resulted in the shutdown of the chip pulping operation. We incurred significant incremental pulp replacement costs to keep the paperboard and tissue machines running at our Lewiston facility during this shutdown, as well as extra costs for overtime labor, maintenance, energy and repair and clean-up. We maintain property and business interruption insurance and filed a claim with our insurance provider to recover the incremental costs incurred as a result of the incident. All associated costs and insurance recoveries were recorded in "Cost of sales" in our Consolidated Statement of Operations and included in cash flows from operations in our Consolidated Statement of Cash Flows. The insurance claim for this event totaled \$4.4 million.

The claim was settled in December 2018, and, net of the policy deductible of \$2.5 million, we received \$1.9 million from our property insurance provider as final payment of the claim.

On January 28, 2017, there was a fire at our Shelby, North Carolina facility warehouse. Although the building sustained minimal damage, the smoke and water damage to raw material and finished goods inventory was more significant. Operations were impacted during the clean-up and repair period. We filed a claim with our insurance providers to recover the cost of repairs to the equipment and estimated lost profits and inventory due to the disruption of the operations during the repair and cleanup period. Net of policy deductibles, the insurance claim for this event totaled \$2.9 million, and was settled in its entirety in the first quarter of 2017. All associated costs and insurance recoveries have been recorded in "Cost of sales" in our Consolidated Statements of Operations and included in cash flows from operations in our Consolidated Statement of Cash Flows.

On November 14, 2016, we experienced a fire at our Las Vegas, Nevada facility. There was minimal disruption to the converting operations at that facility, however certain paper machine equipment was damaged and we incurred approximately 17 days of paper machine downtime while repairs were being made. We were unable to produce through-

air-dried parent rolls during this period at the Las Vegas facility. We were able to replace a portion of this lost production capacity by shipping parent rolls from our Shelby, North Carolina facility, in addition to making open market purchases. We filed a claim with our insurance provider to recover the cost of repairs to the equipment and estimated lost profits due to the disruption of the operations during the repair period. The insurance claim for this event, net of policy deductible, was \$2.9 million, of which \$1.5 million was recorded in the fourth quarter of 2016 and \$1.4 million was recorded in the first quarter of 2017. All associated costs and insurance recoveries have been recorded in "Cost of sales" in our Consolidated Statements of Operations and included in cash flows from operations in our Consolidated Statement of Cash Flows

On July 6, 2016, our Lewiston, Idaho facility experienced an electrical incident that caused a complete plant-wide power outage. Power was restored in approximately 18 hours. However, damage to certain equipment limited pulping operations throughout the remainder of July. In addition to repair costs, we incurred other various costs, including incremental pulp replacement costs, incremental natural gas costs, lost electrical generation and increased labor, chemical and wood costs. We filed a claim with our insurance provider to recover the cost of repairs to the equipment and estimated lost profits due to the disruption of the operations during the repair period. All associated costs and insurance recoveries were recorded in "Cost of sales" in our Consolidated Statement of Operations and included in the "Net earnings" line in our Consolidated Statement of Cash Flows. The insurance claim for this event totaled \$8.5 million. The claim was settled in its entirety in September 2016, and, net of the policy deductible and certain exclusions totaling \$3.5 million, we received \$5.0 million from our property insurance provider as final payment of the claim.

NOTE 19 Segment Information

Our reportable segments are described below.

Consumer Products

Our Consumer Products segment manufactures and sells a complete line of at-home tissue products, or retail products, and away-from-home tissue products, or non-retail products, and parent rolls. Retail products include bath, paper towels, facial and napkin product categories. Non-retail products include conventional one and two-ply bath tissue, two-ply paper towels, hard wound towels and dispenser napkins sold to customers with commercial and industrial tissue needs. Each category is further distinguished according to quality segments: ultra, premium, value and economy.

Pulp and Paperboard

Our Pulp and Paperboard segment manufactures and markets solid bleached sulfate paperboard for the high-end segment of the packaging industry as well as offers custom sheeting, slitting and cutting of paperboard. Our overall production consists primarily of folding carton, liquid packaging, cup and plate products and commercial printing grades. The majority of our Pulp and Paperboard customers are packaging converters, folding carton converters, merchants and commercial printers.

The table below presents information about our reportable segments:

(In thousands)	2018	2017	2016
Segment net sales:			
Consumer Products	\$ 884,812	\$ 941,907	\$ 988,380
Pulp and Paperboard	839,406	788,501	746,383
Total segment net sales	\$ 1,724,218	\$ 1,730,408	\$ 1,734,763
Operating (loss) income:			
Consumer Products ^{1,2,3}	\$ (2,731)	\$ 28,973	\$ 66,164
Gain on divested assets ⁴	23,952	—	1,755
Goodwill impairment	(195,079)	—	—
	(173,858)	28,973	67,919
Pulp and Paperboard ^{2,3}	130,426	97,360	112,700
	(43,432)	126,333	180,619
Corporate ^{2,3,5}	(54,477)	(55,148)	(65,855)
(Loss) income from operations	\$ (97,909)	\$ 71,185	\$ 114,764
Depreciation and amortization:			
Consumer Products ⁶	\$ 57,784	\$ 65,007	\$ 59,375
Pulp and Paperboard	37,798	34,474	26,741
Corporate	6,371	5,509	4,974
Total depreciation and amortization	\$ 101,953	\$ 104,990	\$ 91,090
Assets:			
Consumer Products	\$ 1,094,120	\$ 1,069,876	\$ 1,031,563
Pulp and Paperboard	638,772	645,353	586,687
	1,732,892	1,715,229	1,618,250
Corporate	55,226	87,023	66,092
Total assets	\$ 1,788,118	\$ 1,802,252	\$ 1,684,342
Capital expenditures:			
Consumer Products	\$ 307,794	\$ 112,597	\$ 47,079
Pulp and Paperboard	17,943	74,616	104,113
	325,737	187,213	151,192
Corporate	12,213	11,472	4,485
Total capital expenditures	\$ 337,950	\$ 198,685	\$ 155,677

¹ Operating income for the Consumer Products segment for the twelve months ended December 31, 2017 include costs associated with the March 31, 2017 Oklahoma City facility closure. These costs include \$4.3 million of loss on the write-down of assets to their held for sale value and \$3.2 million of expenses associated with the execution of a sublease for the facility.

² As a result of the adoption of ASU 2017-07, certain pension and OPEB (costs) income have been reclassified from operating to non-operating income. The service cost component of pension and OPEB costs remains within segment operating income. Refer to Note 3, "Recently Adopted and New Accounting Standards," and Note 13, "Savings, Pension and Other Postretirement Benefit Plans," for additional detail.

³ Income (loss) from operations for the Consumer Products, Pulp and Paperboard and Corporate segments for the twelve months ended December 31, 2018 include \$1.9 million, \$0.5 million and \$4.5 million respectively, of expenses associated with our selling, general and administrative cost and control measures.

⁴ Gain on divested assets for the twelve months ended December 31, 2018 relates to the sale of our Ladysmith, Wisconsin facility. For additional discussion, see Note 4 "Asset Divestiture."

⁵ Corporate expenses for 2016 include \$2.7 million of expenses associated with the acquisition of Manchester Industries. Operating results subsequent to the acquisition of Manchester are included in the Pulp and Paperboard segment. Corporate expenses for 2016 also include a \$3.5 million settlement accounting charge associated with a pension lump sum buyout for term-vested participants.

⁶ Depreciation and amortization expense for the Consumer Products segment for the twelve months ended December 31, 2017 and 2016 includes accelerated depreciation of \$3.7 million and \$1.3 million, respectively, associated with the Oklahoma City facility closure.

For the twelve months ended December 31, 2018, 2017, and 2016 one customer, the Kroger Company, accounted for approximately 11.1%, 15.3%, and 13.4%, respectively, of our total company net sales.

Our manufacturing facilities and all other assets are located within the continental United States. We sell and ship our products to customers in many foreign countries. Net sales, classified by the major geographic areas in which our customers are located and by major products, were as follows:

(In thousands)	2018	2017	2016
Primary geographical markets:			
United States	\$ 1,648,610	\$ 1,650,066	\$ 1,663,231
Other Countries	75,608	80,342	71,532
Total Net Sales	\$ 1,724,218	\$ 1,730,408	\$ 1,734,763
Major products:			
Retail tissue	\$ 794,434	\$ 857,642	\$ 865,765
Paperboard	837,891	788,501	746,383
Non-retail tissue	88,214	81,044	121,291
Other	3,679	3,221	1,324
Total net sales	\$ 1,724,218	\$ 1,730,408	\$ 1,734,763

NOTE 20 Financial Results by Quarter (Unaudited)

(In thousands— except per-share amounts)	Three Months Ended							
	March 31,		June 30,		September 30,		December 31,	
	2018	2017	2018	2017	2018	2017	2018	2017
Net sales	\$ 436,952	\$ 437,525	\$ 432,099	\$ 429,663	\$ 426,460	\$ 426,504	\$ 428,707	\$ 436,716
Costs and expenses:								
Cost of sales	(392,433)	(387,060)	(387,154)	(381,061)	(376,221)	(386,762)	(382,204)	(375,458)
Selling, general and administrative expenses	(32,980)	(29,955)	(26,564)	(29,454)	(26,283)	(34,582)	(27,161)	(34,891)
Gain on divested assets	—	—	—	—	22,944	—	1,008	—
Goodwill impairment	—	—	—	—	—	—	(195,079)	—
Total operating costs and expenses	(425,413)	(417,015)	(413,718)	(410,515)	(379,560)	(421,344)	(603,436)	(410,349)
Income (loss) from operations	11,539	20,510	18,381	19,148	46,900	5,160	(174,729)	26,367
Net earnings (loss)	\$ 2,600	\$ 7,515	\$ 6,961	\$ 8,037	\$ 34,444	\$ 863	\$ (187,772)	\$ 80,924
Net earnings (loss) per common share¹								
Basic	\$ 0.16	\$ 0.46	\$ 0.42	\$ 0.49	\$ 2.09	\$ 0.05	\$ (11.39)	\$ 4.92
Diluted	0.16	0.45	0.42	0.48	2.08	0.05	(11.39)	4.88

(1) The sum of quarterly amounts, including per share amounts, may not equal amounts reported for year-to-date periods. This is due to the effects of rounding and changes in the number of weighted-average shares outstanding for each period.

NOTE 21 Supplemental Guarantor Financial Information

All of our directly and indirectly owned, domestic subsidiaries guarantee the 2013 Notes on a joint and several basis. There are no significant restrictions on the ability of the guarantor subsidiaries to make distributions to Clearwater Paper, the issuer of the 2013 Notes. The following tables present the results of operations, financial position and cash flows of Clearwater Paper and its subsidiaries, the guarantor and non-guarantor entities, and the eliminations necessary to arrive at the information for Clearwater Paper on a consolidated basis.

We acquired Manchester Industries on December 16, 2016 and their results of operations, financial position and cash flows are included below as a guarantor entity.

In the first quarter of 2018, the Company adopted a new accounting standard, ASU 2017-07, which resulted in a change in the presentation of pension and postretirement benefit (costs) income other than service costs on a line outside of "Income from operations." The corresponding prior period amounts included in the Consolidating Statements of Operations and Comprehensive Income (Loss) have been reclassified to conform with the current period presentation.

Clearwater Paper Corporation
Consolidating Statement of Operations and Comprehensive Income (Loss)
Year Ended December 31, 2018

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
Net sales	\$ 1,752,343	\$ 194,914	\$ (223,039)	\$ 1,724,218
Costs and expenses:				
Cost of sales	(1,583,009)	(172,965)	217,962	(1,538,012)
Selling, general and administrative expenses	(92,236)	(20,752)	—	(112,988)
Goodwill impairment	(195,079)	—	—	(195,079)
Gain on divested assets, net	—	23,952	—	23,952
Total operating costs and expenses	(1,870,324)	(169,765)	217,962	(1,822,127)
(Loss) income from operations	(117,981)	25,149	(5,077)	(97,909)
Interest expense, net	(30,115)	(505)	—	(30,620)
Non-operating pension and other post employment benefit costs	(4,933)	—	—	(4,933)
(Loss) earnings before income taxes	(153,029)	24,644	(5,077)	(133,462)
Income tax provision	(5,240)	(6,343)	1,278	(10,305)
Equity in earnings of subsidiary	18,301	—	(18,301)	—
Net (loss) earnings	\$ (139,968)	\$ 18,301	\$ (22,100)	\$ (143,767)
Other comprehensive loss, net of tax	(10,513)	—	—	(10,513)
Comprehensive (loss) income	\$ (150,481)	\$ 18,301	\$ (22,100)	\$ (154,280)

Clearwater Paper Corporation
Consolidating Statement of Operations and Comprehensive Income (Loss)
Year Ended December 31, 2017

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
Net sales	\$ 1,707,283	\$ 242,222	\$ (219,097)	\$ 1,730,408
Costs and expenses:				
Cost of sales	(1,525,645)	(219,931)	215,235	(1,530,341)
Selling, general and administrative expenses	(98,412)	(30,470)	—	(128,882)
Total operating costs and expenses	(1,624,057)	(250,401)	215,235	(1,659,223)
Income (loss) from operations	83,226	(8,179)	(3,862)	71,185
Interest expense, net	(30,820)	(554)	—	(31,374)
Non-operating pension and other post employment benefit income	1,143	—	—	1,143
Earnings (loss) before income taxes	53,549	(8,733)	(3,862)	40,954
Income tax benefit	34,250	20,644	1,491	56,385
Equity in earnings of subsidiary	11,911	—	(11,911)	—
Net earnings	\$ 99,710	\$ 11,911	\$ (14,282)	\$ 97,339
Other comprehensive income, net of tax	7,770	—	—	7,770
Comprehensive income	\$ 107,480	\$ 11,911	\$ (14,282)	\$ 105,109

Clearwater Paper Corporation
Consolidating Statement of Operations and Comprehensive Income (Loss)
Year Ended December 31, 2016

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
Net sales	\$ 1,685,327	\$ 287,952	\$ (238,516)	\$ 1,734,763
Costs and expenses:				
Cost of sales	(1,466,623)	(263,577)	236,641	(1,493,559)
Selling, general and administrative expenses	(114,142)	(14,053)	—	(128,195)
Gain on divested assets, net	1,755	—	—	1,755
Total operating costs and expenses	(1,579,010)	(277,630)	236,641	(1,619,999)
Income from operations	106,317	10,322	(1,875)	114,764
Interest expense, net	(30,462)	(189)	—	(30,651)
Non-operating pension and other post employment benefit costs	(3,447)	—	—	(3,447)
Earnings before income taxes	72,408	10,133	(1,875)	80,666
Income tax provision	(26,966)	(4,802)	656	(31,112)
Equity in earnings of subsidiary	5,331	—	(5,331)	—
Net earnings	\$ 50,773	\$ 5,331	\$ (6,550)	\$ 49,554
Other comprehensive income, net of tax	3,795	—	—	3,795
Comprehensive income	\$ 54,568	\$ 5,331	\$ (6,550)	\$ 53,349

Clearwater Paper Corporation
Consolidating Balance Sheet
At December 31, 2018

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
ASSETS				
Current assets:				
Cash and cash equivalents	\$ 22,484	\$ —	\$ —	\$ 22,484
Receivables, net	127,952	17,567	—	145,519
Taxes receivable	16,634	41	(10,374)	6,301
Inventories	222,960	48,361	(5,077)	266,244
Other current assets	3,346	53	—	3,399
Total current assets	393,376	66,022	(15,451)	443,947
Property, plant and equipment, net	1,192,716	76,555	—	1,269,271
Goodwill	35,074	—	—	35,074
Intangible assets, net	1,045	23,035	—	24,080
Intercompany (payable) receivable	(62,846)	57,769	5,077	—
Investment in subsidiary	175,301	—	(175,301)	—
Other assets, net	14,839	2,618	(1,711)	15,746
TOTAL ASSETS	\$1,749,505	\$ 225,999	\$ (187,386)	\$1,788,118
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Short-term debt	\$ 120,833	\$ —	\$ —	\$ 120,833
Accounts payable and accrued liabilities	299,715	31,691	(10,374)	321,032
Current liability for pensions and other postretirement employee benefits	7,430	—	—	7,430
Total current liabilities	427,978	31,691	(10,374)	449,295
Long-term debt	671,292	—	—	671,292
Liability for pensions and other postretirement employee benefits	78,191	—	—	78,191
Other long-term obligations	38,977	—	—	38,977
Accrued taxes	1,918	867	—	2,785
Deferred tax liabilities	104,753	18,140	(1,711)	121,182
TOTAL LIABILITIES	1,323,109	50,698	(12,085)	1,361,722
Accumulated other comprehensive loss, net of tax	(67,348)	—	—	(67,348)
Stockholders' equity excluding accumulated other comprehensive loss	493,744	175,301	(175,301)	493,744
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$1,749,505	\$ 225,999	\$ (187,386)	\$1,788,118

Clearwater Paper Corporation
Consolidating Balance Sheet
At December 31, 2017

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
ASSETS				
Current assets:				
Cash and cash equivalents	\$ 15,738	\$ —	\$ —	\$ 15,738
Receivables, net	125,001	17,064	—	142,065
Taxes receivable	20,242	40	—	20,282
Inventories	228,311	41,594	(3,862)	266,043
Other current assets	8,587	74	—	8,661
Total current assets	397,879	58,772	(3,862)	452,789
Property, plant and equipment, net	936,659	114,323	—	1,050,982
Goodwill	244,161	—	—	244,161
Intangible assets, net	2,089	30,453	—	32,542
Intercompany (payable) receivable	(2,807)	(1,055)	3,862	—
Investment in subsidiary	157,000	—	(157,000)	—
Other assets, net	21,413	2,696	(2,331)	21,778
TOTAL ASSETS	\$1,756,394	\$ 205,189	\$ (159,331)	\$1,802,252
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Short-term debt	\$ 155,000	\$ —	\$ —	155,000
Accounts payable and accrued liabilities	235,439	21,182	—	256,621
Current liability for pensions and other postretirement employee benefits	7,631	—	—	7,631
Total current liabilities	398,070	21,182	—	419,252
Long-term debt	570,524	—	—	570,524
Liability for pensions and other postretirement employee benefits	72,469	—	—	72,469
Other long-term obligations	43,275	—	—	43,275
Accrued taxes	1,928	842	—	2,770
Deferred tax liabilities	94,694	26,165	(2,331)	118,528
TOTAL LIABILITIES	1,180,960	48,189	(2,331)	1,226,818
Accumulated other comprehensive loss, net of tax	(43,983)	—	—	(43,983)
Stockholders' equity excluding accumulated other comprehensive loss	619,417	157,000	(157,000)	619,417
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$1,756,394	\$ 205,189	\$ (159,331)	\$1,802,252

Clearwater Paper Corporation
Consolidating Statement of Cash Flows
Year Ended December 31, 2018

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
CASH FLOWS FROM OPERATING ACTIVITIES				
Net (loss) earnings	\$ (139,968)	\$ 18,301	\$ (22,100)	\$ (143,767)
Adjustments to reconcile net (loss) earnings to net cash flows from operating activities:				
Goodwill impairment	195,079	—	—	195,079
Depreciation and amortization	81,812	20,141	—	101,953
Equity-based compensation expense	3,314	—	—	3,314
Deferred taxes	15,019	(7,935)	—	7,084
Employee benefit plans	(116)	—	—	(116)
Deferred issuance costs on debt	1,356	—	—	1,356
Gain on divested assets, net	—	(25,510)	—	(25,510)
Disposal of plant and equipment, net	727	(1)	—	726
Other non-cash activity	146	—	—	146
Changes in working capital, net	24,455	904	(9,159)	16,200
Change in taxes receivable, net	3,607	(1)	10,374	13,980
Other, net	(1,790)	244	—	(1,546)
Net cash flows from operating activities	183,641	6,143	(20,885)	168,899
CASH FLOWS FROM INVESTING ACTIVITIES				
Additions to property, plant and equipment	(293,766)	(1,942)	—	(295,708)
Net proceeds from divested assets	70,930	—	—	70,930
Other, net	793	14	—	807
Net cash flows from investing activities	(222,043)	(1,928)	—	(223,971)
CASH FLOWS FROM FINANCING ACTIVITIES				
Borrowings on short-term debt	630,848	—	—	630,848
Repayments of borrowings on short-term debt	(565,015)	—	—	(565,015)
Investment (to) from parent	(16,670)	(4,215)	20,885	—
Payment of tax withholdings on equity-based payment arrangements	(413)	—	—	(413)
Payments for debt issuance costs	(2,139)	—	—	(2,139)
Net cash flows from financing activities	46,611	(4,215)	20,885	63,281
Increase in cash, cash equivalents and restricted cash	8,209	—	—	8,209
Cash, cash equivalents and restricted cash at beginning of period	16,738	—	—	16,738
Cash, cash equivalents and restricted cash at end of period	\$ 24,947	\$ —	\$ —	\$ 24,947

Clearwater Paper Corporation
Consolidating Statement of Cash Flows
Year Ended December 31, 2017

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
CASH FLOWS FROM OPERATING ACTIVITIES				
Net earnings	\$ 99,710	\$ 11,911	\$ (14,282)	\$ 97,339
Adjustments to reconcile net earnings to net cash flows from operating activities:				
Depreciation and amortization	76,862	28,128	—	104,990
Equity-based compensation expense	3,620	—	—	3,620
Deferred taxes	(16,957)	(23,632)	—	(40,589)
Employee benefit plans	(4,371)	—	—	(4,371)
Deferred issuance costs on debt	1,199	—	—	1,199
Disposal of plant and equipment, net	512	3,541	—	4,053
Other non-cash activity	1,750	—	—	1,750
Changes in working capital, net	8,776	5,529	7,456	21,761
Change in taxes receivable, net	(5,099)	(5)	(5,469)	(10,573)
Other, net	2,585	(3,094)	—	(509)
Net cash flows from operating activities	168,587	22,378	(12,295)	178,670
CASH FLOWS FROM INVESTING ACTIVITIES				
Additions to property, plant and equipment	(193,864)	(5,884)	—	(199,748)
Other, net	283	668	—	951
Net cash flows from investing activities	(193,581)	(5,216)	—	(198,797)
CASH FLOWS FROM FINANCING ACTIVITIES				
Purchase of treasury stock	(4,875)	—	—	(4,875)
Borrowings on short-term debt	298,308	—	—	298,308
Repayments of borrowings on short-term debt	(278,308)	—	—	(278,308)
Investment from (to) parent	8,282	(20,577)	12,295	—
Payment of tax withholdings on equity-based payment arrangements	(1,127)	—	—	(1,127)
Payments for debt issuance costs	(134)	—	—	(134)
Net cash flows from financing activities	22,146	(20,577)	12,295	13,864
Decrease in cash, cash equivalents and restricted cash	(2,848)	(3,415)	—	(6,263)
Cash, cash equivalents and restricted cash at beginning of period	19,586	3,415	—	23,001
Cash, cash equivalents and restricted cash at end of period	\$ 16,738	\$ —	\$ —	\$ 16,738

Clearwater Paper Corporation
Consolidating Statement of Cash Flows
Year Ended December 31, 2016

(In thousands)	Issuer	Guarantor Subsidiaries	Eliminations	Total
CASH FLOWS FROM OPERATING ACTIVITIES				
Net earnings	\$ 50,773	\$ 5,331	\$ (6,550)	\$ 49,554
Adjustments to reconcile net earnings to net cash flows from operating activities:				
Depreciation and amortization	68,496	22,594	—	91,090
Equity-based compensation expense	12,385	—	—	12,385
Deferred taxes	18,860	605	(1,138)	18,327
Employee benefit plans	(1,979)	—	—	(1,979)
Deferred issuance costs on debt	1,242	—	—	1,242
Disposal of plant and equipment, net	781	600	—	1,381
Other non-cash activities	740	18	—	758
Changes in working capital, net of acquisition	(642)	774	(3,594)	(3,462)
Change in taxes receivable, net	1,078	(1,405)	5,469	5,142
Other, net	(1,904)	(921)	1,138	(1,687)
Net cash flows from operating activities	149,830	27,596	(4,675)	172,751
CASH FLOWS FROM INVESTING ACTIVITIES				
Additions to property, plant and equipment	(145,579)	(9,770)	—	(155,349)
Acquisition of Manchester Industries, net of cash acquired	(67,443)	—	—	(67,443)
Other, net	250	36	—	286
Net cash flows from investing activities	(212,772)	(9,734)	—	(222,506)
CASH FLOWS FROM FINANCING ACTIVITIES				
Borrowings on short-term debt	1,273,959	—	—	1,273,959
Repayments of borrowings on short-term debt	(1,138,959)	—	—	(1,138,959)
Purchase of treasury stock	(65,327)	—	—	(65,327)
Investment from (to) parent	9,772	(14,447)	4,675	—
Payments for debt issuance costs	(1,906)	—	—	(1,906)
Payment of tax withholdings on equity-based payment arrangements	(933)	—	—	(933)
Other, net	312	—	—	312
Net cash flows from financing activities	76,918	(14,447)	4,675	67,146
Increase in cash, cash equivalents and restricted cash	13,976	3,415	—	17,391
Cash, cash equivalents and restricted cash at beginning of period	5,610	—	—	5,610
Cash, cash equivalents and restricted cash at end of period	\$ 19,586	\$ 3,415	\$ —	\$ 23,001

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

Clearwater Paper Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Clearwater Paper Corporation and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 18, 2019 expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2007.

Seattle, Washington

March 18, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

Clearwater Paper Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited Clearwater Paper Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weaknesses, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements), and our report dated March 18, 2019 expressed an unqualified opinion on those consolidated financial statements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. Material weaknesses have been identified and included in management's assessment related to an insufficient complement of knowledgeable and experienced resources and inadequate risk assessment with respect to events and transactions outside the ordinary course of business, and, as a result, insufficient controls over the identification and accounting implications of changes to payment arrangements with vendors. The material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2018 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting 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 the assets of the company; (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 of the company are being made only in accordance with authorizations of management and directors of the company; 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.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Seattle, Washington

March 18, 2019

ITEM 9.

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A.

Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, or the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of disclosure controls and procedures is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Our management, with the participation of our CEO and CFO, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the fiscal year covered by this annual report on Form 10-K. Based on that evaluation, the CEO and CFO have concluded that, due to material weaknesses in our internal control over financial reporting described below, our disclosure controls and procedures were not effective as of December 31, 2018 to meet the objective for which they were designed.

The material weaknesses resulted from the following series of events. In 2018, we entered into certain significant transactions and experienced certain events outside the ordinary course of our business. Among others, in connection with the expansion of our facility located in Shelby, North Carolina, the payments for certain vendor agreements were processed through our supply chain financing program. The supply chain financing program allowed our vendors to finance their receivables directly with third party payors in order to receive payment of the invoices earlier than their payment terms with us. Following the implementation of our supply chain financing program, we subsequently discovered that we had been reimbursing some of our vendors for the difference between the amount of their invoice and the amount they receive from the third party payors. This resulted in certain payables incurred as part of the supply chain financing program and initially classified as trade payables being reclassified as debt. During 2018, we also experienced significant staffing changes.

Notwithstanding the identified material weaknesses, management has concluded that the consolidated financial statements included in this annual report on Form 10-K fairly present in all material respects the Company’s financial position, results of operations and cash flows at and for the periods presented in accordance with U.S. generally accepted accounting principles (“GAAP”).

Management Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company’s assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that the Company’s receipts and expenditures are being made only in accordance with authorizations of the Company’s management and directors; and (iii) 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.

Under the supervision of and with the participation of our CEO and our CFO and with the oversight of the Audit Committee of the Board of Directors, our management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework and criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("2013 Framework").

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Based on our evaluation under the 2013 Framework, our management identified the following material weaknesses as of December 31, 2018:

- (i) With respect to events and transactions outside the ordinary course of business:
 - a. we did not maintain a sufficient complement of personnel with the appropriate knowledge and experience in generally accepted accounting principles and their application to our financial reporting processes and related internal controls; and
 - b. we did not conduct effective risk assessment that adequately identified, assessed and addressed risks of material misstatement in the financial statements, including fraud risks and risks from changes in our operations and organizational structure.
- (ii) As a consequence, we did not design and maintain effective process-level controls over the identification and accounting implications of changes made to payment arrangements with vendors.

These material weaknesses resulted in certain immaterial misstatements in accounts payable and accrued liabilities and short-term debt, and related presentation in the consolidated statement of cash flows in the preliminary consolidated financial statements as of and for the year ended December 31, 2018 that were corrected prior to the issuance of the consolidated financial statements. These control deficiencies create a reasonable possibility that a material misstatement to the consolidated financial statements will not be prevented or detected on a timely basis, and therefore we have concluded that the deficiencies represent material weaknesses in internal control over financial reporting and our internal control over financial reporting was not effective as of December 31, 2018.

Our independent registered public accounting firm, KPMG LLP, has expressed an adverse opinion on the effectiveness of our internal control over financial reporting, as stated in its report which is included on pages 89-90 in Item 8A of this annual report on Form 10-K.

Remedial Actions

We plan to address the material weaknesses identified by hiring additional accounting personnel, by implementing enhanced controls governing our risk management committee, our disclosure committee and our sub-certifications, and by designing additional controls over the documentation and application of technical accounting guidance with particular emphasis on events outside the ordinary course of business, including changes to payment arrangements with vendors.

Management believes that the remediation efforts to be undertaken will effectively remediate the material weaknesses. As we continue to evaluate and work to improve our internal control over financial reporting, management may determine to take additional measures to address control deficiencies or determine to modify the remediation plan described above. We cannot assure you, however, when we will remediate such weaknesses, nor can we be certain of whether additional actions will be required or the costs of any such actions.

Changes in Internal Controls

Other than the identification and assessment of the material weaknesses described above, there was no change in our internal control over financial reporting during the quarter ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B.

Other Information

None.

Part III

ITEM 10.

Directors, Executive Officers and Corporate Governance

Information regarding our directors is set forth under the heading “Board of Directors” in our definitive proxy statement, to be filed on or about April 2, 2019, for the 2019 Annual Meeting of Stockholders, referred to in this report as the 2019 Proxy Statement, which information is incorporated herein by reference. Information concerning Executive Officers is included in Part I of this report in Item 1. Information regarding reporting compliance with Section 16(a) for directors, officers or other parties is set forth under the heading “Section 16(a) Beneficial Ownership Reporting Compliance” in the 2019 Proxy Statement and is incorporated herein by reference.

We have adopted a Code of Business Conduct and Ethics that applies to all directors and employees and a Code of Ethics for Senior Financial Officers that applies to our CEO, CFO, the President, the Controller and other Senior Financial Officers identified by our Board of Directors. You can find each code on our website by going to the following address: www.clearwaterpaper.com, selecting “Investor Relations” and “Corporate Governance,” then selecting the link for “Code of Business Conduct and Ethics” or “Code of Ethics for Senior Financial Officers.” We will post any amendments, as well as any waivers that are required to be disclosed by the rules of either the SEC or the New York Stock Exchange, on our website. To date, no waivers of the Code of Ethics for Senior Financial Officers have been considered or granted.

Our Board of Directors has adopted corporate governance guidelines and charters for the Board of Directors’ Audit Committee, Compensation Committee, and Nominating and Governance Committee. You can find these documents on our website by going to the following address: www.clearwaterpaper.com, selecting “Investor Relations” and “Corporate Governance,” then selecting the appropriate link.

The Audit Committee of our Board of Directors is an “audit committee” for purposes of Section 3(a)(58) of the Exchange Act. As of January 1, 2019, the members of that committee were William D. Larsson (Chair), Kevin J. Hunt, and Alexander Toeldte. The Board of Directors has determined that Messrs. Larsson, Hunt and Toeldte are “audit committee financial experts” and that all of the members of the Audit Committee are “independent” as defined under the applicable rules and regulations of the SEC and the listing standards of the New York Stock Exchange.

ITEM 11.

Executive Compensation

Information required by Item 11 of Part III is included under the heading “Executive Compensation Discussion and Analysis” in our 2019 Proxy Statement, to be filed on or about April 2, 2019, relating to our 2019 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 12.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information required by Item 12 of Part III is included in our 2019 Proxy Statement, to be filed on or about April 2, 2019, relating to our 2019 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 13.

Certain Relationships and Related Transactions, and Director Independence

Information required by Item 13 of Part III is included under the heading “Transactions with Related Persons” in our 2019 Proxy Statement, to be filed on or about April 2, 2019, relating to our 2019 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 14.

Principal Accounting Fees and Services

Information required by Item 14 of Part III is included under the heading “Fees Paid to Independent Registered Public Accounting Firm” in our 2019 Proxy Statement, to be filed on or about April 2, 2019, relating to our 2019 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

ITEM 15. Exhibits, Financial Statement Schedules

FINANCIAL STATEMENTS

Our consolidated financial statements are listed in the Index to Consolidated Financial Statements on page 43 of this report.

FINANCIAL STATEMENT SCHEDULES

All schedules have been omitted because the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements, including the notes thereto.

EXHIBITS

EXHIBIT NUMBER	DESCRIPTION
3.1*	<u>Restated Certificate of Incorporation of the Company, effective as of December 16, 2008, as filed with the Secretary of State of the State of Delaware (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the Commission on December 18, 2008).</u>
3.2*	<u>Amended and Restated Bylaws of the Company, effective as of December 16, 2008 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed with the Commission on December 18, 2008).</u>
4.1*	<u>Indenture, dated as of January 23, 2013, by and among Clearwater Paper Corporation (the "Registrant"), the Guarantors (as defined therein) and U.S. Bank National Association, as trustee, (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Commission on January 24, 2013).</u>
4.2*	<u>Form of 4.500% Senior Notes due 2023 (incorporated by reference as Exhibit A to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Commission on January 24, 2013).</u>
4.3*	<u>Indenture, dated as of July 29, 2014, by and among Clearwater Paper Corporation (the "Registrant"), the Guarantors (as defined therein) and U.S. Bank National Association, as trustee, (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Commission on July 29, 2014).</u>
4.4*	<u>Form of 5.375% Senior Notes due 2025 (incorporated by reference as Exhibit A to the Indenture filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Commission on July 29, 2014).</u>
10.1*	<u>Commercial Bank Agreement, dated as of October 31, 2016, by and among the financial institutions signatory thereto, Wells Fargo Bank, National Association and Clearwater Paper Corporation (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on November 3, 2016).</u>
10.1(i)*	<u>Amendment to Commercial Bank Agreement, effective as of December 31, 2017, by and among the financial institutions signatory thereto, Wells Fargo Bank, National Association and Clearwater Paper Corporation (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on January 11, 2018).</u>

- 10.1(ii)* [Amendment No. 2 to the Credit Agreement and Amendment to the Collateral Agreement, effective as of June 27, 2018, by and among the financial institutions signatory thereto, Wells Fargo Bank, National Association and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10\(ii\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended June 30, 2018\).](#)
- 10.1(iii)* [Amendment No. 3 to the Credit Agreement, effective as of August 21, 2018, by and among the financial institutions signatory thereto, Wells Fargo Bank, National Association and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10\(i\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended September 30, 2018\).](#)
- 10.1(iv) [Amendment No. 4 to the Credit Agreement, effective as of November 8, 2018, by and among the financial institutions signatory thereto, Wells Fargo Bank, National Association and Clearwater Paper Corporation.](#)
- 10.2* [Farm Credit Agreement, dated as of October 31, 2016, by and among the financial institutions signatory thereto, Northwest Farm Credit Services, PCA, and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on November 3, 2016\).](#)
- 10.2(i)* [Amendment to Farm Credit Agreement, effective as of December 31, 2017, by and among the financial institutions signatory thereto, Northwest Farm Credit Services, PCA, and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on January 11, 2018\).](#)
- 10.2(ii)* [Amendment No. 2 to Credit Agreement and Amendment to the Collateral Agreement, effective as of June 27, 2018, by and among the financial institutions signatory thereto, Northwest Farm Credit Services, PCA, and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10\(iii\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended June 30, 2018\).](#)
- 10.2(iii)* [Amendment No. 3 to the Credit Agreement, effective as of August 21, 2018, by and among the financial institutions signatory thereto, Northwest Farm Credit Services, PCA, and Clearwater Paper Corporation \(incorporated by reference to Exhibit 10\(ii\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended September 30, 2018\).](#)
- 10.2(iv) [Amendment No. 4 to the Credit Agreement, effective as of November 8, 2018, by and among the financial institutions signatory thereto, Northwest Farm Credit Services, PCA, and Clearwater Paper Corporation.](#)
- 10.3*¹ [Form of Indemnification Agreement entered into between the Company and each of its directors and executive officers \(incorporated by reference to Exhibit 10.15 to Amendment No. 4 to the Company's Registration Statement on Form 10 filed with the Commission on November 19, 2008\).](#)
- 10.4*¹ [Employment Agreement between Linda K. Massman and the Company, dated effective January 1, 2016 \(incorporated by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K filed with the Commission February 22, 2016\).](#)
- 10.4(i)*¹ [Amendment to Employment Agreement between Linda K. Massman and the Company, dated effective January 1, 2018 \(incorporated by reference to Exhibit 10\(ii\) to the Company's Current Report on Form 8-K filed with the Commission on March 9, 2018\).](#)
- 10.5*¹ [Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on May 8, 2015\).](#)

- 10.5(i)*¹ [Amendment to the Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan, effective January 1, 2017 \(incorporated by reference to Exhibit 10.5\(i\) to the Company's Annual Report on Form 10-K filed with the Commission on February 22, 2017\).](#)
- 10.5(ii)*¹ [Clearwater Paper Corporation 2017 Stock Incentive Plan \(incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on May 11, 2017\).](#)
- 10.6*¹ [Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan—Form of Performance Share Agreement to be used for annual performance share awards approved subsequent to December 31, 2015 \(incorporated by reference to Exhibit 10.6\(iv\) to the Company's Annual Report on Form 10-K filed with the Commission February 22, 2016\).](#)
- 10.6(i)*¹ [Clearwater Paper Corporation—Form of Performance Share Agreement, as amended and restated, to be used for annual performance share awards approved subsequent to December 31, 2016 \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on February 10, 2017\).](#)
- 10.6(ii)*¹ [Clearwater Paper Corporation-Form of Performance Share Agreement, as amended and restated, to be used for annual performance share awards approved subsequent to December 31, 2018 \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on February 14, 2019\).](#)
- 10.7*¹ [Clearwater Paper Corporation 2008 Stock Incentive Plan—Form of Restricted Stock Unit Agreement, as amended and restated December 1, 2009, to be used for annual restricted stock unit awards approved subsequent to December 31, 2009, \(incorporated by reference to Exhibit 10.12\(ii\) to the Company's Current Report on Form 8-K filed with the Commission on December 4, 2009\).](#)
- 10.7(i)*¹ [Clearwater Paper Corporation 2008 Stock Incentive Plan—Form of RSU Deferral Agreement for Founders Grant RSUs \(incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed with the Commission on December 14, 2011\).](#)
- 10.7(ii)*¹ [Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan—Form of Restricted Stock Unit Agreement, to be used for restricted stock unit awards approved subsequent to December 31, 2015 \(incorporated by reference to Exhibit 10.7\(xii\) to the Company's Annual Report on Form 10-K filed with the Commission February 22, 2016\).](#)
- 10.7(iii)*¹ [Clearwater Paper Corporation—Form of Restricted Stock Unit Agreement, as amended and restated, to be used for restricted stock unit awards approved subsequent to December 31, 2016 \(incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on February 10, 2017\).](#)
- 10.7(iv)*¹ [Clearwater Paper Corporation-Form of Restricted Stock Unit Agreement, as amended and restated, to be used for restricted stock unit awards approved subsequent to December 31, 2017 \(incorporated by reference to Exhibit 10.7\(x\) to the Company's Annual Report on Form 10-K filed with the Commission on February 21, 2018\).](#)
- 10.8*¹ [Clearwater Paper Corporation 2008 Stock Incentive Plan—Form of Stock Option Agreement \(incorporated by reference to Exhibit 10.3 to the Company's current Report on Form 8-K filed with the Commission on February 18, 2014\).](#)
- 10.8(i)*¹ [Clearwater Paper Corporation 2008 Stock Incentive Plan—Form of Amendment of Stock Option Agreement, effective as of January 1, 2015 \(incorporated by reference to Exhibit 10.7\(i\) to the Company's Annual Report on Form 10-K filed with the Commission on February 26, 2015\).](#)
- 10.8(ii)*¹ [Clearwater Paper Corporation 2008 Stock Incentive Plan—Form of Stock Option Agreement, to be used for annual restricted stock unit awards approved subsequent to December 31, 2014 \(incorporated by reference to Exhibit 10.7\(ii\) to the Company's Annual Report on Form 10-K filed with the Commission on February 26, 2015\).](#)

- 10.8(iii)*¹ [Clearwater Paper Corporation Amended and Restated 2008 Stock Incentive Plan—Form of Stock Option Agreement, to be used for annual restricted stock unit awards approved subsequent to December 31, 2015 \(incorporated by reference to Exhibit 10.8\(iii\) to the Company's Annual Report on Form 10-K filed with the Commission February 22, 2016\).](#)
- 10.8(iv)*¹ [Clearwater Paper Corporation— Form of Stock Option Agreement, as amended and restated, to be used for annual restricted stock unit awards approved subsequent to December 31, 2016 \(incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed with the Commission on February 10, 2017\).](#)
- 10.8(v)*¹ [Clearwater Paper Corporation- Form of Stock Option Agreement, as amended and restated, to be used for annual restricted stock unit awards approved subsequent to December 31, 2017 Clearwater Paper Corporation- Form of Stock Option Agreement, as amended and restated, to be used for annual restricted stock unit awards approved subsequent to December 31, 2017 \(incorporated by reference to Exhibit 10.8\(v\) to the Company's Annual Report on Form 10-K filed with the Commission on February 21, 2018\).](#)
- 10.9*¹ [Clearwater Paper Corporation Annual Incentive Plan \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on May 9, 2014\).](#)
- 10.9(i)*¹ [Amendment to the Clearwater Paper Corporation Annual Incentive Plan, effective as of January 1, 2016 \(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 10-Q filed with the Commission on July 27, 2016\).](#)
- 10.10*¹ [Amended and Restated Clearwater Paper Corporation Management Deferred Compensation Plan \(incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K filed with the Commission for the year ended December 31, 2016\).](#)
- 10.11*¹ [Clearwater Paper Executive Severance Plan \(incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K filed with the Commission on February 20, 2014\).](#)
- 10.11(i)*¹ [Clearwater Paper Amended Executive Severance Plan \(incorporated by reference to Exhibit 10\(i\) to the Company's Current Report on Form 8-K filed with the Commission on March 9, 2018\).](#)
- 10.12*¹ [Amended and Restated Clearwater Paper Corporation Salaried Supplemental Benefit Plan \(incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K filed with the Commission for the year ended December 31, 2016\).](#)
- 10.13*¹ [Clearwater Paper Corporation Benefits Protection Trust Agreement \(incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K filed with the Commission for the year ended December 31, 2008\).](#)
- 10.13(i)*¹ [Amendment to the Clearwater Paper Corporation Benefits Protection Trust Agreement, dated August 8, 2013 \(incorporated by reference to Exhibit 10.16\(i\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended September 30, 2013\).](#)
- 10.14*¹ [Amended and Restated Clearwater Paper Corporation Deferred Compensation Plan for Directors, \(incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed with the Commission on December 7, 2017\).](#)
- 10.14(i)*¹ [Amended and Restated Clearwater Paper Corporation Deferred Compensation Plan for Directors, \(incorporated by reference to Exhibit 10\(i\) to the Company's Quarterly Report on Form 10-Q filed with the Commission for the quarter ended June 30, 2018\).](#)
- 10.15*¹ [Clearwater Paper Change of Control Plan \(incorporated by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K filed with the Commission on February 20, 2014\).](#)
- (21) [Clearwater Paper Corporation Subsidiaries.](#)

- (23) [Consent of Independent Registered Public Accounting Firm.](#)
- (24) [Powers of Attorney.](#)
- (31) [Rule 13a-14\(a\)/15d-14\(a\) Certifications.](#)
- (32) [Furnished statements of the Chief Executive Officer and Chief Financial Officer under 18 U.S.C. Section 1350.](#)

101 Pursuant to Rule 405 of Regulation S-T, the following financial information from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, is formatted in XBRL interactive data files: (i) Consolidated Statements of Operations for the years ended December 31, 2018, 2017 and 2016; (ii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2018, 2017 and 2016; (iii) Consolidated Balance Sheets at December 31, 2018 and 2017, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016, (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2018, 2017 and 2016 and (vi) Notes to Consolidated Financial Statements.

* Incorporated by reference.

¹ Management contract or compensatory plan, contract or arrangement.

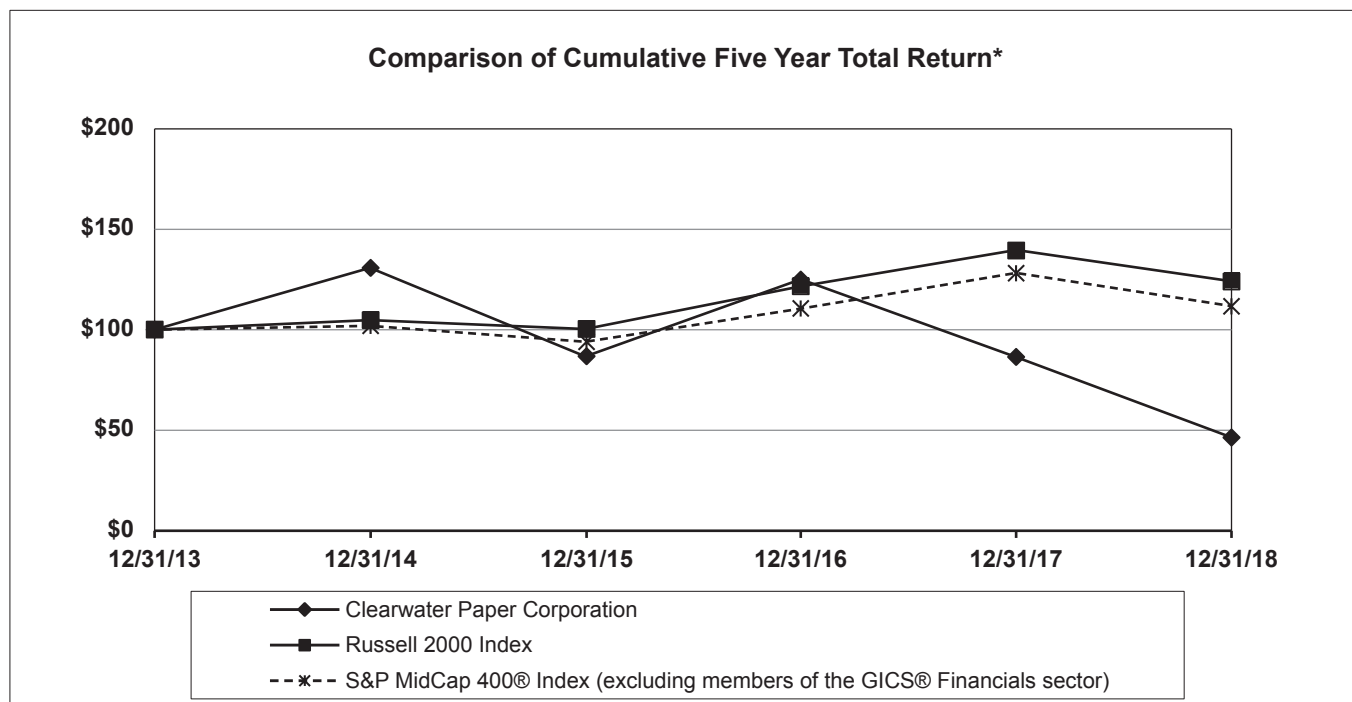
ITEM 16.
Form 10-K Summary

Not applicable.

Performance Graph

The below graph compares the cumulative total stockholder return of our common stock for the period beginning December 31, 2013 and ending December 31, 2018, with the cumulative total return during such period of the Russell 2000® Index and the S&P MidCap 400® Index (excluding those companies classified as members of the GICS® Financials sector). The comparison assumes \$100 was invested on December 31, 2013, in our common stock and in the indices and assumes dividends were reinvested. The stock performance shown on the below graph represents historical stock performance and is not necessarily indicative of future stock price performance.

We measure our relative corporate performance for purposes of performance-based equity awards issued to our executive officers against a specific index. Each year, an index is selected to apply to performance-based equity awards issued in that year. We currently measure our relative performance, for purposes of performance-based equity awards, against the S&P MidCap 400® Index (excluding those companies classified as members of the GICS® Financials sector). The cumulative return for that index is listed below.



*This comparison assumes \$100 was invested on December 31, 2013, in our common stock and in the indices and assumes dividends were reinvested.

Corporate Information

MANAGEMENT

Linda K. Massman

President and Chief Executive Officer

Robert G. Hrivnak

Senior Vice President, Finance and Chief Financial Officer
(effective April 8, 2019)

Steve M. Bowden

Senior Vice President, General Manager,
Pulp and Paperboard Division

Michael S. Gadd

Senior Vice President, General Counsel
and Corporate Secretary

Arsen S. Kitch

Senior Vice President, General Manager,
Consumer Products Division

Kari G. Moyes

Senior Vice President, Human Resources

BOARD OF DIRECTORS

Kevin J. Hunt

Director since 2013

William D. Larsson

Director since 2008

Linda K. Massman

Director Since 2013
President and Chief Executive Officer

John P. O'Donnell

Director since 2016
President and CEO, Neenah, Inc.

Alexander Toeldte

Chair of the Board, Director since 2016

EXECUTIVE OFFICES

601 West Riverside Avenue
Suite 1100
Spokane, WA 99201
Phone: 509.344.5900

STOCK LISTING

Clearwater Paper common stock is listed under the symbol CLW on the New York Stock Exchange.

ANNUAL MEETING

The 2019 Annual Meeting of Stockholders will be held on Monday, May 13, 2019, at 9:00 a.m. (Pacific Time). The meeting will be held at the Grand Hyatt, 721 Pine Street, Seattle, Washington, 98101.

TRANSFER AGENT

MAILING ADDRESSES

Shareholder correspondence should be mailed to:
Computershare
P.O. BOX 505000
Louisville, KY 40233

Overnight correspondence should be sent to:
Computershare
462 South 4th Street Suite 1600
Louisville, KY 40202

SHAREHOLDER WEBSITE

www.computershare.com/investor

Shareholder online inquiries

<https://www-us.computershare.com/investor/Contact>

Toll Free Number	866-205-6799
Outside the U.S.	201-680-6578
Hearing Impaired	800-490-1493
TDD International	781-575-4592

ADDITIONAL INFORMATION

Copies of the company's filings with the Securities and Exchange Commission, the company's Corporate Governance Guidelines, Code of Business Conduct and Ethics, and Charters of the Committees of the Board of Directors are available free of charge at the company's website, www.clearwaterpaper.com.

FORWARD-LOOKING STATEMENTS

This report contains, in addition to historical information, certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding financial benefits of our Lewiston, Idaho continuous digester, market conditions, strategic investments, cost reductions, new paper machine and other expansion at our Shelby, N.C. facility, tissue production, industry fundamentals, product quality and shareholder value. These forward-looking statements are based on management's current expectations, estimates, assumptions and projections that are subject to change. Our actual results of operations may differ materially from those expressed or implied by the forward-looking statements contained in this report. Important factors that could cause or contribute to such differences include those discussed in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations - Developments and Trends in Our Business" sections contained in our Annual Report on Form 10-K for the year ended December 31, 2018, included herein. Forward-looking statements contained in this report present management's views only as of the date of this report. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise.

FSC®-CERTIFIED PAPER

Clearwater Paper Corporation's Annual Report was printed by Donnelley Financial Solutions entirely on FSC-certified paper. Chain-of-Custody certificate TT-COC-005939. The Annual Report was printed on Donnelley Financial Opaque Text manufactured from FSC-recycled content.





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