

LOUISIANA-PACIFIC CORP  
Form 10-K  
February 13, 2018

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

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FORM 10-K  
Annual Report Pursuant to Section 13 or 15(d)  
of the Securities Exchange Act of 1934  
For the fiscal year ended Commission File Number  
December 31, 2017 1-7107

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Louisiana-Pacific Corporation  
(Exact name of registrant as specified in its charter)  
Delaware 93-0609074  
(State of Incorporation) (I.R.S. Employer  
Identification No.)

414 Union Street, Suite 2000 615-986-5600  
Nashville, TN 37219  
(Address of principal executive offices) Registrant's telephone number  
(including area code)

Securities registered pursuant to Section 12(b) of the Act:  
Title of Each Class Name of Each Exchange on Which Registered  
Common Stock, \$1 par value New York Stock Exchange  
Preferred Stock Purchase Rights New York Stock Exchange  
Securities registered pursuant to Section 12(g) of the Act: None

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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.

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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth 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  Accelerated filer   
Non-accelerated filer  Smaller reporting company   
Emerging growth company

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 Exchange Act). Yes  No

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

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was sold, or the average bid and asked price of such common equity, as of the last business day of the registrant’s most recently completed second fiscal quarter: \$3,437,713,529.

Indicate the number of shares outstanding of each of the registrant’s classes of common stock as of the latest practicable date: 144,949,753 shares of Common Stock, \$1 par value, outstanding as of February 12, 2018.

Documents Incorporated by Reference

Definitive Proxy Statement for 2018 Annual Meeting: Part III

Except as otherwise specified and unless the context otherwise requires, references to “LP”, the “Company”, “we”, “us”, and “our” refer to Louisiana-Pacific Corporation and its subsidiaries.

## ABOUT FORWARD-LOOKING STATEMENTS

Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 provide a “safe harbor” for forward-looking statements to encourage companies to provide prospective information about their businesses and other matters as long as those statements are identified as forward-looking and are accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those discussed in the statements. This report contains, and other reports and documents filed by us with the Securities and Exchange Commission (SEC) may contain, forward-looking statements. These statements are or will be based upon the beliefs and assumptions of, and on information available to, our management.

The following statements are or may constitute forward-looking statements: (1) statements preceded by, followed by or that include words like “may,” “will,” “could,” “should,” “believe,” “expect,” “anticipate,” “intend,” “plan,” “estimate,” “po,” “continue” or “future” or the negative or other variations thereof and (2) other statements regarding matters that are not historical facts, including without limitation, plans for product development, forecasts of future costs and expenditures, possible outcomes of legal proceedings, capacity expansion and other growth initiatives and the adequacy of reserves for loss contingencies.

Factors that could cause actual results to differ materially from those expressed or implied by the forward-looking statements include, but are not limited to the following:

- changes in governmental fiscal and monetary policies and levels of employment;
- changes in general economic conditions;
- changes in the cost and availability of capital;
- changes in the level of home construction and repair activity;
- changes in competitive conditions and prices for our products;
- changes in the relationship between supply of and demand for building products;
- changes in the relationship between supply of and demand for raw materials, including wood fiber and resins, used in manufacturing our products;
- changes in the cost of and availability of energy, primarily natural gas, electricity and diesel fuel;
- changes in the cost of and availability of transportation;
- changes in other significant operating expenses;
- changes in exchange rates between the U.S. dollar and other currencies, particularly the Canadian dollar, Brazilian real and Chilean peso;
- changes in general and industry-specific environmental laws and regulations;
- changes in tax laws, and interpretations thereof;
- changes in circumstances giving rise to environmental liabilities or expenditures;
- the resolution of existing and future product-related litigation and other legal proceedings; and
- acts of public authorities, war, civil unrest, natural disasters, fire, floods, earthquakes, inclement weather and other matters beyond our control.

In addition to the foregoing and any risks and uncertainties specifically identified in the text surrounding forward-looking statements, any statements in the reports and other documents filed by us with the SEC that warn of risks or uncertainties associated with future results, events or circumstances identify important factors that could cause actual results, events and circumstances to differ materially from those reflected in the forward-looking statements.

## ABOUT THIRD-PARTY INFORMATION

In this report, we rely on and refer to information regarding industry data obtained from market research, publicly available information, industry publications, U.S. government sources and other third parties. Although we believe the information is reliable, we cannot guarantee the accuracy or completeness of the information and have not independently verified it.

## PART I

### ITEM 1. Business

#### General

Our company, founded in 1973 and headquartered in Nashville, Tennessee, is a leading manufacturer of building products. As of December 31, 2017, we had approximately 5,000 employees. We currently operate 20 modern, strategically located facilities in the U.S. and Canada, two facilities in Chile and one facility in Brazil. We also operate facilities through a joint venture, for which we are the exclusive provider of product distribution for North America. Our products are used primarily in new home construction, repair and remodeling and outdoor structures. We believe that the homebuilding products industry presents significant growth opportunities over the long run, and we intend to continue pursuing these opportunities by delivering innovative, high-quality commodity and specialty building products to retail, wholesale, homebuilding and industrial customers. We utilize various tools, such as an enterprise resource planning system and Lean Six Sigma, to improve operational efficiency and productivity.

#### Our Overall Strategies

**Continue to Grow Market Share and Capitalize on Strength in New Home Construction.** We continue to strategically invest in our operations with the goal of maximizing profitability as the new home construction and repair and remodeling markets continue to strengthen. We believe the initiatives implemented and investments we have made during the past few years, and which we continue to make, have strengthened our market position and enhanced our ability to capture significant cash flow growth from continued improvement in the end markets we serve. We have also focused our sales and marketing efforts with the purpose of generating more sales of our products per housing start.

**Generate Value Added Sales Growth through Customer Focus and Innovation.** Our marketing efforts target builders, industrial manufacturers and major home improvement retailers and focus on the features of our products. Our sales efforts target customers by channel and focus on providing these customers with quality service and a broad array of traditional and specialty building products. We continue to grow our high value add products to provide growing stable margins. Our facilities are strategically located in the United States, Canada and South America, allowing us to be closer to our customers and more responsive to end-user needs and trends. We prioritize quality service and continue to enhance our reputation for accurate deliveries on a timely basis. In addition, we continually seek to identify new specialty building products and markets where we can utilize our core competencies in the design, manufacturing and marketing of building products.

**Continue to Grow Our Siding Segment and Expand Internationally in Order to Diversify Revenue Mix.** We believe that we are currently the leading producer of treated engineered wood siding and, therefore, are poised to benefit from demand growth as it continues to displace alternative siding materials such as vinyl, wood and other materials. Furthermore, this segment is less sensitive to new housing market cyclicality as over 50% of its demand comes from other markets including sheds, retail and the repair and remodeling end market. Our investments in South America will help us continue to satisfy the growing demand for structural panels in South America to support the growth of affordable housing. This growth in the Siding and South American segments will continue to diversify our revenue mix.

**Improve Operating Efficiencies and Continue Focus on Cost Reductions and Portfolio Optimization.** We have improved and continue to lower the cost structure of our facilities through our Lean Six Sigma efforts and the sale or closure of underperforming mills and manufacturing facilities, as well as investing in technology. Our Lean Six Sigma efforts continue to produce excellent returns from cost-savings and efficiency projects across our organization. We have also structured our management teams along product lines to enhance our ability to implement best

manufacturing practices across operations. Given these initiatives and the strategic locations of many of our facilities, we believe that we are one of the lowest average delivered-cost producers of oriented strand board (OSB) in North America. We also employ a strategy of curtailing production at selected facilities, when appropriate, in order to meet customer demand, and optimize our portfolio and margins. As market conditions

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continue to change and improve, we plan to adapt our product mix, selectively invest in new technologies that modernize our manufacturing facilities, and develop improved manufacturing processes in order to enhance the quality and consistency of our earnings.

**Pursue Selected Strategic Transactions.** We evaluate on an ongoing basis various opportunities to participate in acquisitions of assets, businesses and activities that are complementary, and other strategic business combination transactions. We believe that our pursuit of these opportunities, if successful, could enable us to increase the size and scope of our businesses or joint ventures.

### Business Segments

We operate in four segments: Siding; North America Oriented Strand Board (OSB); Engineered Wood Products (EWP); and South America. In general, our business results are affected by the level of housing starts; the level of home repairs; changes in industry capacity; changes in the prices we pay for raw materials and energy, and changes in foreign exchange rates (primarily the Canadian dollar, Chilean Peso and Brazilian Real).

### Siding

Our Siding segment consists of LP SmartSide® trim and siding, LP CanExel® prefinished siding, as well as LP Outdoor Building Solutions® innovative products for premium outdoor buildings. Our SmartSide® products consist of a full line of wood-based sidings, trim, soffit and fascia. These products have quality and performance characteristics similar to solid wood at more attractive prices due to lower raw material and production costs. Our CanExel® siding and accessory product offerings include a number of pre-finished lap and trim products in a variety of patterns and textures. These products are used in new construction, repair and remodeling and outdoor structures such as sheds. We believe we are the largest producer of engineered wood siding. We believe we operate in diverse end markets with stable pricing.

Our strategy is to drive product innovation by utilizing our technological expertise in wood and wood composites to better address the needs of our customers. We intend to increase our product offerings and production capacity of higher margin, value-added products through the addition of lower cost plants or the conversion of OSB plants from commodity structural panel production to OSB-based exterior siding products.

Additionally, some amounts of OSB are produced and sold in this segment.

### OSB

Our OSB segment manufactures and distributes OSB structural panel products including LP OSB, LP TechShield® radiant barrier, LP TopNotch® sub-flooring, LP Legacy® super tough, moisture-resistant sub-flooring and LP FlameBlock® fire-rated sheathing.

OSB is an innovative, affordable and environmentally friendly product made from wood strands arranged in layers and bonded with resin. OSB serves many of the same uses as plywood, including roof decking, sidewall sheathing and floor underlayment, but can be produced at a significantly lower cost. It is estimated for 2017 that OSB accounted for approximately 67% of the structural panel consumption in North America with plywood accounting for the remainder. We estimate that the overall North American structural panel market (based upon 2017 housing starts) was 34.6 billion square feet with the OSB market comprising an estimated 23.2 billion square feet of this market. Based upon our production in 2017 of 4.7 billion square feet (including OSB produced in our siding and EWP segments), we estimate that we account for 20% of the North American OSB market and 13% of the overall North American structural panel market. During 2017, our volume percentage of value-added OSB was 38% as compared to 34% in 2016. We believe we are a leading producer of commodity and value-added OSB in North America and are positioned to compete in all geographic markets.

To enhance our industry leading position in the OSB business, we plan to: (1) leverage our expertise in OSB to capitalize on new opportunities for revenue growth through value-added product lines; (2) deliver superior quality

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and service; (3) reduce costs and improve throughput and recovery by continuing to focus on efficiency, raw materials cost reductions and logistics; and (4) manage our capacity to meet our customers' expected needs for OSB.

### Engineered Wood Products

Our EWP segment is comprised of LP SolidStart® I-Joist (IJ), Laminated Veneer Lumber (LVL) and Laminated Strand Lumber (LSL) and other related products. This segment also includes the sale of I-Joist produced by our joint venture with Resolute Forest Products and LVL sold under a contract manufacturing arrangement. We believe that in North America, we are one of the top three producers (including our joint venture production) of I-Joists, LVL and LSL. A plywood mill associated with our LVL operations in British Columbia and minor amounts of OSB are also included in this segment. We believe that our engineered I-joists, which are used primarily in residential and commercial flooring and roofing systems and other structural applications, are stronger, lighter and straighter than conventional lumber joists. Our LVL and LSL are high-grade, value-added structural products used in applications where extra strength and quality is required, such as headers and beams.

Our strategy is to strengthen our brand name recognition in the EWP market by enhancing our product mix and quality, providing superior technical support to our customers and leveraging our sales and marketing relationships to cross-sell our EWP products. Additionally, we are seeking to drive costs down by rationalizing our production capacity across geographic areas and improving operating efficiencies in our manufacturing facilities.

### South America

Our South American segment manufactures and distributes OSB and siding products in South America and certain export markets. This segment also distributes and sells related products to augment the transition to wood frame construction. We believe we are the only producer of OSB and siding in South America. We believe we are positioned to capitalize on the growing demand for wood-based residential construction in South America.

### Other Products

Our other products category includes our remaining timber and timberlands, and other minor products, services and closed or idled operations.

### Sales, Marketing and Distribution

Our sales and marketing efforts are primarily focused on traditional two-step distribution, professional building products dealers, home centers, third-party wholesale buying groups and other retailers. The wholesale distribution channel includes a variety of specialized and broad-line wholesale distributors and dealers focused primarily on the supply of products for use by professional builders and contractors. The retail distribution channel includes large retail chains catering to the do-it-yourself (DIY) and repair and remodeling markets as well as smaller independent retailers.

### Customers

We seek to maintain a broad customer base and a balanced approach to national distribution through both wholesale and retail channels. In 2017, our top ten customers accounted for approximately 46% of our sales. Our principal customers include the following:

- Wholesale distribution companies, which supply building materials to retailers on a regional, state or local basis;
- Two-step distributors, who provide building materials to smaller retailers, contractors and others;
- Building materials professional dealers, that specialize in sales to professional builders, remodeling firms and trade contractors that are involved in residential home construction and light commercial building;



Retail home centers, that provide access to consumer markets with a broad selection of home improvement materials and increasingly serve professional builders, remodelers DIY, and trade contractors; and

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Shed producers, who design, construct and distribute prefabricated residential and light commercial structures, including fully manufactured, modular and panelized structures, for consumer and professional markets.

### Seasonality

Our business is subject to seasonal variances, with demand for many of our products tending to be greater during the building season, which generally occurs in the second and third quarters in North America and the fourth and first quarters in South America. From time to time, we engage in promotional activities designed to stimulate demand for our products, such as reducing our selling prices and providing extended payment terms, particularly at times when demand is otherwise relatively soft. We do this in an effort to better balance our inventory levels with demand, manage the logistics of our product shipments, allow our production facilities to run efficiently, be competitive, and/or obtain initial orders from customers.

### Competitors / Competition

The building products industry is highly competitive. We compete internationally with several thousand forest and building products firms, ranging from very large, fully integrated firms to smaller enterprises that may manufacture only one or a few items. We also compete less directly with firms that manufacture substitutes for wood building products. Some competitors have substantially greater financial and other resources than we do that could, in some instances, give them a competitive advantage over us.

In terms of our commodity OSB, we compete based upon price, quality and availability of products. In terms of our specialty products, including EWP, Siding and various value added OSB products, we compete based upon price, quality, and availability of products as well as performance features offered.

### Raw Materials

Wood fiber is the primary raw material used in most of our operations, and the primary source of wood fiber is timber. The primary end-markets for timber harvested in the North America are manufacturers who supply: (1) the housing market, where it is used in the construction of new housing and the repair and remodeling of existing housing; (2) the pulp and paper market; (3) commercial and industrial markets; (4) export markets; and (5) emerging biomass energy production markets. The supply of timber is limited by the availability of timberlands and access to the fiber. The availability of timberlands, in turn, is limited by several factors, including forest management policies, alternate uses of land, and loss to urban or suburban real estate development. Because wood fiber is subject to commodity pricing, the cost of various types of timber that we purchase in the market has at times fluctuated greatly due to weather, governmental regulations / restrictions, economic or other industry conditions. However, our mills are generally in close proximity to large and diverse supplies of timber and have the ability to procure wood fiber at competitive prices.

In addition to wood fiber, we use significant quantities of various resins in our manufacturing processes. Resin product costs are influenced by changes in the prices of raw materials used to produce resin, primarily petroleum products and energy, as well as competing demand for resin products. Currently, we purchase the majority of our resin from three major suppliers and believe our relationships with those suppliers are good. However, there can be no assurance that pricing or availability of resins will not be impacted based upon competing demand.

While a large portion of our energy requirements are met at our plants through the energy produced from the conversion of wood waste, we also purchase substantial amounts of energy in our operations, primarily electricity and natural gas. Energy prices have experienced significant volatility in recent years, particularly in deregulated markets. We attempt to mitigate our exposure to energy price changes through the selective use of long-term supply

agreements.

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## Environmental Compliance / Climate Change

Our operations are subject to many environmental laws and regulations governing, among other things, the discharge of pollutants and other emissions on or into land, water and air, the disposal of hazardous substances or other contaminants, the remediation of contamination and the restoration and reforestation of timberlands. In addition, certain environmental laws and regulations impose liability and responsibility on present and former owners, operators or users of facilities and sites for contamination at such facilities and sites without regard to causation or knowledge of contamination. Compliance with environmental laws and regulations can significantly increase the costs of our operations. In some cases, plant closures can result in more onerous compliance requirements becoming applicable to a facility or a site. Violations of environmental laws and regulations can subject us to additional costs and expenses, including defense costs and expenses and civil and criminal penalties. We cannot assure you that the environmental laws and regulations to which we are subject will not become more stringent, or be more stringently implemented or enforced, in the future.

Changes in global or regional climate conditions and current or future governmental response to such changes at the international, U.S. federal and state levels, such as regulating and/or taxing the production of carbon dioxide and other “greenhouse gases” to facilitate the reduction of emissions into the atmosphere, and/or the imposition of taxes or other incentives to produce and use “cleaner” energy, may increase energy costs, limit harvest levels and impact our operations or our planned or future growth activities. Because our manufacturing operations depend upon significant amounts of energy and raw materials, these initiatives could have an adverse impact on our operations and profitability. Future legislation or regulatory activity in this area remains uncertain, and the impact on our operations is unclear at this time.

Our policy is to comply fully with all applicable environmental laws and regulations. We devote significant management attention to achieving full compliance. In addition, from time to time, we undertake construction projects for environmental control equipment or incur other environmental costs that extend an asset’s useful life, improve its efficiency or improve the marketability of certain properties.

Additional information concerning environmental matters is set forth under item 3, Legal Proceedings, and in Note 19 of the Notes to the consolidated financial statements included in item 8 of this report.

## Employees

We employ approximately 5,000 people, about 952 of whom are members of unions, primarily in Canada, Chile and Brazil. We consider our relationship with our employees generally to be good. While we do not currently anticipate any work stoppages, there can be no assurance that work stoppages will not occur.

## Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC’s website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC’s public reference room at 100 F Street, NE., Washington, D.C. 20549. You may obtain information on the operation of the SEC’s public reference room in Washington, D.C. by calling the SEC at 1-800-SEC-0330.

In addition, we will make available our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act through our internet website at <http://www.lpcorp.com> as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.



## Segment and Price Trend Data

The following table sets forth, for each of the last three years: (1) our production volumes and (2) the estimated average wholesale price of OSB sold in the United States. In addition, information concerning our: (1) net sales by business segment; (2) profit (loss) by business segment; (3) identifiable assets by segment; (4) depreciation and amortization by business segment; (5) capital expenditures by business segment; and (6) geographic segment information is included at Note 24 of the Notes to the consolidated financial statements included in item 8 of this report and information concerning our sales by product line is included in item 7 of this report.

## Product Information Summary

For Years Ended December 31

(Amounts in millions, except per unit)

	2017	2016	2015
<b>PRODUCTION VOLUMES</b>			
OSB, <sup>3/8</sup> " basis, million square feet <sup>(1)</sup>	4,660	4,542	4,170
South America OSB / Siding, million cubic meters	504	484	458
Wood-based siding, <sup>3/8</sup> " basis, million square feet	1,365	1,282	1,111
Engineered I-joists, million lineal feet <sup>(2)</sup>	87	78	77
LVL, thousand cubic feet <sup>(2)</sup> <sup>(3)</sup>	8,069	6,844	7,025
LSL, thousand cubic feet <sup>(3)</sup>	3,275	2,708	2,509
<b>COMMODITY PRODUCT PRICE TRENDS<sup>(4)</sup></b>			
OSB, MSF, <sup>7/16</sup> " span rating (North Central price)	\$ 353	\$ 269	\$ 208
OSB, MSF, <sup>7/16</sup> " span rating (Western Canada price)	\$ 326	\$ 234	\$ 168
OSB, MSF, <sup>7/16</sup> " span rating (Southwest price)	\$ 334	\$ 258	\$ 199

<sup>(1)</sup> Includes production at both our commodity and specialty mills in North America.

<sup>(2)</sup> Includes purchases of products from joint ventures or purchased under contract manufacturing arrangements.

<sup>(3)</sup> Includes LVL and LSL production which is used in the production of I-Joist as well as sold as end products.

<sup>(4)</sup> Prices represent yearly averages stated in dollars per thousand square feet (MSF). Source: Random Lengths.

## ITEM 1A. Risk Factors

You should be aware that the occurrence of any of the events described in this Risk Factors section and elsewhere in this report or in any other of our filings with the SEC could have a material adverse effect on our business, financial position, results of operations and cash flows. In evaluating us, you should consider carefully, among other things, the risks described below and the matters described in “About Forward-Looking Statements.”

Our business primarily relies on North American new home construction and repair which are impacted by risks associated with fluctuations in the housing market. Downward changes in the general economy, the housing market or other business conditions could adversely affect our results of operations, cash flows and financial condition. The housing market is sensitive to changes in economic conditions and other factors, such as the level of employment, access to labor, consumer confidence, consumer income, availability of financing and interest rate levels. Adverse changes in any of these conditions generally, or in any of the markets where we operate, could decrease demand and could adversely impact our businesses by: causing consumers to delay or decrease homeownership; making consumers more price conscious resulting in a shift in demand to smaller homes; making consumers more reluctant to make investments in their existing homes; or making it more difficult to secure loans for major renovations or new home construction. Although the U.S. new home construction market is improving, demand for new homes is still recovering after the 2007-2009 U.S. economic recession and continues to remain below historical levels.

We have a high degree of product concentration in OSB. OSB accounted for about 54%, 51% and 47% of our North American sales in 2017, 2016 and 2015 and we expect OSB sales to continue to account for a substantial portion of our revenues and profits in the future. Concentration of our business in the OSB market further increases our sensitivity to commodity pricing and price volatility. Historical prices for our commodity products have been volatile, and we, like other participants in the building products industry, have limited influence over the timing and extent of price changes for our products. Commodity product pricing is significantly affected by the relationship between supply and demand in the building products industry. Product supply is influenced primarily by fluctuations in available manufacturing capacity. Demand is affected by the state of the economy in general and a variety of other factors, including the level of new residential construction activity and home repair and remodeling activity, changes in the availability and cost of mortgage financing. In this competitive environment with so many variables for which we do not control, we cannot assure you that pricing for OSB will not decline from current levels.

Intense competition in the building products industry could prevent us from increasing or sustaining our net sales and profitability. The markets for our products are highly competitive. Our competitors range from very large, fully integrated forest and building products firms to smaller firms that may manufacture only one or a few types of products. Many of our competitors have greater financial and other resources than we do, and certain of the mills operated by our competitors may be lower-cost producers than the mills operated by us.

Our results of operations may be harmed by potential shortages of raw materials and increases in raw material costs. The most significant raw material used in our operations is wood fiber. Wood fiber is subject to commodity pricing, which fluctuates on the basis of market factors over which we have no control. In addition, the cost of various types of wood fiber that we purchase in the market has at times fluctuated greatly because of governmental, economic or industry conditions, and may be affected by increased demand resulting from initiatives to increase the use of biomass materials in the production of heat, power, bio-based products and bio-fuels. In addition to wood fiber, we also use a significant quantity of various resins in our manufacturing processes. Resin product costs are influenced by changes in the prices or availability of raw materials used to produce resins, primarily petroleum products, as well as demand for and availability of resin products. Selling prices of our products have not always increased in response to raw material cost increases. We are unable to determine to what extent, if any, we will be able to pass any future raw material cost increases through to our customers through product price increases. Our inability to pass increased costs through to

our customers could have a material adverse effect on our financial condition, results of operations and cash flows.

Many of the Canadian forestlands from which we obtain wood fiber also are subject to the constitutionally protected treaty or common-law rights of the aboriginal peoples of Canada. Most of British Columbia is not covered by

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treaties and, as a result, the claims of British Columbia's aboriginal peoples relating to forest resources are largely unresolved, although many aboriginal groups are actively engaged in treaty discussions with the governments of British Columbia and Canada. Final or interim resolution of claims brought by aboriginal groups are expected to result in additional restrictions on the sale or harvest of timber and may increase operating costs and affect timber supply and prices in Canada.

We mostly depend on third parties for transportation services and increases in costs and the availability of transportation could materially and adversely affect our business and operations. Our business depends on the transportation of a large number of products, both domestically and internationally. We rely primarily on third parties for transportation of the products we manufacture and/or distribute as well as for delivery of our raw materials. In particular, a significant portion of the goods we manufacture and raw materials we use are transported by railroad or trucks, which are highly regulated. If any of our third-party transportation providers were to fail to deliver the goods we manufacture or distribute in a timely manner, we may be unable to sell those products at full value or at all. Similarly, if any of these providers were to fail to deliver raw materials to us in a timely manner, we may be unable to manufacture our products in response to customer demand. In addition, if any of these third parties were to cease operations or cease doing business with us, we may be unable to replace them at reasonable cost. Any failure of a third-party transportation provider to deliver raw materials or finished products in a timely manner could harm our reputation, negatively affect our customer relationships and have a material adverse effect on our financial condition and results of operations. In addition, an increase in transportation rates or fuel surcharges could materially and adversely affect our sales and profitability.

We are subject to significant environmental regulation and environmental compliance expenditures and liabilities. Our businesses are subject to many environmental laws and regulations, particularly with respect to discharges of pollutants and other emissions on or into land, water and air, and the disposal and remediation of hazardous substances or other contaminants and the restoration and reforestation of timberlands. Compliance with these laws and regulations is a significant factor in our business. We have incurred and expect to continue to incur significant expenditures to comply with applicable environmental laws and regulations. Moreover, some or all of the environmental laws and regulations to which we are subject could become more stringent in the future. Our failure to comply with applicable environmental laws and regulations and permit requirements could result in civil or criminal fines or penalties or enforcement actions, including regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, installation of pollution control equipment or remedial actions.

Some environmental laws and regulations impose liability and responsibility on present and former owners, operators or users of facilities and sites for contamination at such facilities and sites without regard to causation or knowledge of contamination. In addition, we occasionally evaluate various alternatives with respect to our facilities, including possible dispositions or closures. Investigations undertaken in connection with these activities may lead to discoveries of contamination that must be remediated, and closures of facilities may trigger compliance requirements that are not applicable to operating facilities. Consequently, we cannot assure you that existing or future circumstances or developments with respect to contamination will not require significant expenditures by us.

We are involved in various environmental matters, product liability and other legal proceedings. The outcome of these matters and proceedings and the magnitude of related costs and liabilities are subject to uncertainties. The conduct of our business involves the use of hazardous substances and the generation of contaminants and pollutants. In addition, the end-users of many of our products are members of the general public. We currently are or from time to time in the future may be involved in a number of environmental matters and legal proceedings, including legal proceedings involving anti-trust, warranty or non-warranty product liability claims, negligence and other claims, including claims for wrongful death, personal injury and property damage alleged to have arisen out of the use by others of our or our predecessors' products or the release by us or our predecessors of hazardous substances. Environmental matters and legal matters and proceedings, including class action settlements relating to certain of our products, have in the past

caused and in the future may cause us to incur substantial costs. We have established contingency reserves in our consolidated financial statements with respect to the estimated costs of existing environmental matters and legal proceedings to the extent that our management has determined that such costs are both probable and reasonably estimable as to amount. However, such reserves are based upon various estimates and assumptions relating to future events and circumstances, all of which are subject to inherent uncertainties. We

regularly monitor our estimated exposure to environmental and litigation loss contingencies and, as additional information becomes known, may change our estimates significantly. However, no estimate of the range of any such change can be made at this time. We may incur costs in respect of existing and future environmental matters and legal proceedings as to which no contingency reserves have been established. We cannot assure you that we will have sufficient resources available to satisfy the related costs and expenses associated with these matters and proceedings.

We have not independently verified the results of third-party research or confirmed assumptions or judgments upon which it may be based, and the forecasted and other forward-looking information contained therein is subject to inherent uncertainties. We refer in this report and other documents that we file with the SEC to historical, forecasted and other forward-looking information published by sources such as RISI (Resource Information Systems, Inc.), FEA (Forest Economic Advisors, LLC), Random Lengths and the U.S. Census Bureau that we believe to be reliable. However, we have not independently verified this information and, with respect to the forecasted and forward-looking information, have not independently confirmed the assumptions and judgments upon which it is based. Forecasted and other forward looking information is necessarily based on assumptions regarding future occurrences, events, conditions and circumstances and subjective judgments relating to various matters, and is subject to inherent uncertainties. Actual results may differ materially from the results expressed or implied by, or based upon, such forecasted and forward-looking information.

Cyber security risks related to the technology used in our operations and other business processes, as well as security breaches of company, customer, employee, and vendor information, could adversely affect our business. We rely on various information technology systems to capture, process, store, and report data and interact with customers, vendors, and employees. Despite careful security and controls design, implementation, updating, and internal and independent third-party assessments, our information technology systems, and those of our third-party providers, could become subject to cyber-attacks. Network, system, and data breaches could result in misappropriation of sensitive data or operational disruptions, including interruption to systems availability and denial of access to and misuse of applications required by our customers to conduct business with us. In addition, hardware and operating system software and applications that we procure from third parties may contain defects in design or manufacture, including "bugs" and other problems that could unexpectedly interfere with the operation of the systems. Misuse of internal applications; theft of intellectual property, trade secrets, or other corporate assets; and inappropriate disclosure of confidential information could stem from such incidents. A security failure of that technology could impact our ability to operate our businesses effectively, adversely affect our reported financial results, impact our reputation and expose us to potential liability or litigation.

ITEM 1B. Unresolved Staff Comments

None.

## ITEM 2. Properties

Information regarding our principal properties and facilities is set forth in the following tables. Information regarding currently operating production capacities is based on annual normal operating rates and normal production mixes under current market conditions, taking into account known constraints such as log supply. Market conditions, fluctuations in log supply, environmental restrictions and the nature of current orders may cause actual production rates and mixes to vary significantly from the production rates and mixes shown.

OSB		Siding	
OSB - 3/8" basis, million square feet		Siding - 3/8" basis, million square feet	
Carthage, TX	500	Newberry, MI	150
Dawson Creek, British Columbia, Canada <sup>1</sup>	380	Hayward, WI <sup>2</sup>	475
Ft. St. John, British Columbia, Canada	800	Tomahawk, WI	230
Hanceville, AL	420	Two Harbors, MN	200
Jasper, TX	475	Roaring River, NC	300
Maniwaki, Quebec, Canada	650	East River, Nova Scotia, Canada	55
Roxboro, NC	525	Swan Valley, Manitoba, Canada <sup>2</sup>	350
Sagola, MI	420	7 facilities	1,760
Thomasville, AL	725		
9 facilities	4,895		

## EWP

## SOUTH AMERICAN OPERATIONS

I-Joist, million lineal feet <sup>3</sup>		OSB / Siding — 3/8" basis, million square feet	
Red Bluff, CA	80	Panguipulli, Chile	130
		Lautaro, Chile	160
LVL / LSL, million cubic feet		Ponta Grossa, Brazil	390
Golden, BC, Canada	4,000	3 facilities	680
Wilmington, NC	4,600		
Houlton, ME <sup>2</sup>	5,500		
3 facilities	14,100		

<sup>1</sup> During the latter portion of 2017, we announced our intent to convert the Dawson OSB mill to a siding mill in 2018 with production start up anticipated in early 2019.

<sup>2</sup> The Hayward, WI, Swan Valley siding and Houlton, ME LSL facilities can produce commodity OSB when market conditions warrant.

<sup>3</sup> In addition to the plants described, our 50/50 joint venture with Resolute Forest Products owns and operates a plant in St. Prime, Quebec, Canada and a plant in La Rouche, Quebec, Canada. The combined annual production capacity of these facilities is 140 million lineal feet.

ITEM 3. Legal Proceedings

ENVIRONMENTAL MATTERS

We are involved in a number of environmental proceedings and activities, and may be wholly or partially responsible for known or unknown contamination existing at a number of other sites at which we have conducted operations or disposed of wastes. Based on the information currently available, management believes that any fines, penalties or other costs or losses resulting from these matters will not have a material adverse effect on our financial position, results of operations, cash flows or liquidity.

OTHER PROCEEDINGS

LP is party to other legal proceedings in the ordinary course of business. Based on the information currently available, LP believes that the resolution of such proceedings will not have a material adverse effect on its financial position, results of operations, cash flows or liquidity.

CONTINGENCY RESERVES

We maintain reserves for the estimated cost of the legal and environmental matters referred to above. However, as with any estimate, there is uncertainty of predicting the outcomes of claims and litigation and environmental investigations and remediation efforts that could cause actual costs to vary materially from current estimates. Due to various uncertainties, we cannot predict to what degree actual payments will exceed the recorded liabilities related to these matters. However, it is possible that, in either the near term or the longer term, revised estimates or actual payments will significantly exceed the recorded liabilities.

For information regarding our financial statement reserves for the estimated costs of the environmental and legal matters referred to above, see Note 19 of the Notes to financial statements included in item 8 in this report.

ITEM 4. Mine Safety Disclosures

N/A

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## PART II

## ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The common stock of LP is listed on the New York Stock Exchange with the ticker symbol "LPX." Information regarding the high and low sales prices for the common stock for each quarter of the last two years is as follows:

	1ST QTR	2ND QTR	3RD QTR	4TH QTR
<b>HIGH AND LOW STOCK PRICES</b>				
2017 High	\$ 24.82	\$ 26.73	\$ 29.14	\$ 28.46
Low	\$ 18.83	\$ 22.28	\$ 23.45	\$ 25.97
2016 High	\$ 18.09	\$ 18.77	\$ 20.97	\$ 21.16
Low	\$ 13.31	\$ 15.74	\$ 17.19	\$ 17.08

As of February 9, 2018, there were approximately 4,786 holders of record of our common stock. No dividends were paid in 2017 or 2016.

**ISSUER PURCHASES OF EQUITY SECURITIES**

On October 31, 2014, LP's Board of Directors authorized LP to repurchase up to \$100 million of LP's common stock. LP may initiate, discontinue or resume purchases of its common stock under this authorization in the open market, in privately negotiated transactions or otherwise at any time or from time to time without prior notice. As of February 13, 2018, no purchases have occurred under this authorization.

**PERFORMANCE GRAPH**

The following graph compares the total cumulative return to investors, including dividends paid (assuming reinvestment of dividends) and appreciation or depreciation in stock price, from an investment in LP common stock for the period from December 31, 2012 through December 31, 2017, to the total cumulative return to investors from the Standard & Poor's 500 Stock Index and the Dow Jones US Forestry & Paper Index for the same period. Stockholders are cautioned that the graph shows the returns to investors only as of the dates noted and may not be representative of the returns for any other past or future period.



## ITEM 6. Selected Financial Data

Dollar amounts in millions, except per share Year ended December 31	2017	2016	2015 <sup>(1)</sup>	2014	2013	
<b>SUMMARY INCOME STATEMENT DATA</b>						
Net sales	\$2,733.9	\$2,233.4	\$1,892.5	\$1,934.8	\$2,085.2	
Income (loss) from continuing operations	391.1	150.3	(86.0 )	(73.4 )	177.4	
Net income (loss)	389.8	149.8	(88.1 )	(75.4 )	177.1	
Income (loss) from continuing operations, per share—basic	\$2.71	\$1.05	\$(0.60 )	\$(0.52 )	\$1.27	
Income (loss) from continuing operations, per share—diluted	\$2.67	\$1.03	\$(0.60 )	\$(0.52 )	\$1.23	
Net income (loss) per share—basic	\$2.70	\$1.04	\$(0.62 )	\$(0.53 )	\$1.27	
Net income (loss) per share—diluted	\$2.66	\$1.03	\$(0.62 )	\$(0.53 )	\$1.23	
Average shares of common stock outstanding						
Basic	144.4	143.4	142.4	141.1	139.6	
Diluted	146.4	145.3	142.4	141.1	144.3	
Cash dividends declared per common share	\$—	\$—	\$—	\$—	\$—	
<b>SUMMARY BALANCE SHEET INFORMATION</b>						
Cash and cash equivalents	\$928.0	\$659.3	\$434.7	\$532.7	\$560.9	
Working capital (excluding cash and cash equivalents)	\$161.5	\$120.2	\$191.4	\$244.9	\$180.5	
Total assets	\$2,448.5	\$2,031.2	\$2,176.3	\$2,348.8	\$2,487.6	
Long-term debt, excluding current portion	\$350.8	\$374.4	\$751.8	\$754.8	\$757.0	
Capital expenditures	\$148.6	\$124.8	\$113.8	\$80.1	\$75.6	
Business acquisitions	\$20.8	\$—	\$—	\$—	\$67.4	
<b>NON-GAAP MEASURES</b>						
Adjusted EBITDA from continuing operations	\$666.8	\$346.1	\$67.0	\$44.1	\$330.2	
Adjusted income from continuing operations <sup>(2)</sup>	\$341.2	\$129.5	\$(46.1 )	\$(65.8 )	\$171.6	
Return on invested capital <sup>(2)</sup>	18.5	% 8.4	% (3.1 )	% (4.2 )	% 11.2	%

<sup>(1)</sup> As of December 31, 2015, we adopted guidance under ASU No 2015-03, "Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs" which reclassified certain deferred debt costs as a direct deduction from the carrying amount of that debt liability. All prior periods were restated to reflect this adoption.

<sup>(2)</sup> See reconciliation and definitions to the necessary GAAP measures included in Item 7.



## ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our consolidated financial statements and related notes and other financial information appearing elsewhere in this Form 10-K. The following discussion includes statements that are forward-looking statements that are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management.

### OVERVIEW

#### General

LP is a leading manufacturer of sustainable, quality engineered wood building materials including OSB, structural framing products, and exterior siding for use in residential, industrial and light commercial construction. Our products are used primarily in new home construction, repair and remodeling, and outdoor structures. We also market and sell our products in light industrial and commercial construction and we have a modest export business. Our manufacturing facilities are primarily located in the U.S. and Canada, but we also operate two facilities in Chile and one facility in Brazil.

To serve these markets, we operate in four segments: Siding; North America Oriented Strand Board (OSB); Engineered Wood Products (EWP); and South America.

#### Executive Summary

We recorded a 22% increase in sales to \$2.7 billion for the year ended December 31, 2017 from \$2.2 billion reported for the year ended December 31, 2016. We recorded income from operations of \$523.4 million during 2017 compared to \$204.0 million during the prior year. We recorded net income of \$389.8 million (\$2.66 per diluted share) during 2017 compared to \$149.8 million (\$1.03 per diluted share) during the prior year. We reported an increase of \$320.7 million in Adjusted EBITDA between years. Improvements in OSB pricing in all North American operations had a positive impact of \$307.3 million for 2017 as compared to 2016 for operating results.

We recorded an 18% increase in sales to \$2.2 billion for the year ended December 31, 2016 from \$1.9 billion reported for the year ended December 31, 2015. We recorded income from operations of \$204.0 million during 2016 compared a loss of \$63.3 million during the prior year. We recorded net income of \$149.8 million (\$1.03 per diluted share) during 2016 compared to a loss of \$88.1 million (\$0.62 per diluted share) during the prior year. We reported an increase of \$279.1 million in Adjusted EBITDA between years. Improvements in OSB pricing in all North American operations had a positive impact of \$215.2 million for 2016 as compared to 2015 operating results.

The following tables provides a breakdown of our sales for the last three years by product category.

For the year ended December 31, 2017

	Siding	OSB	EWP	South America	Other	Inter-segment	Total
SmartSide® siding	\$757.6	\$—	\$—	\$ 19.7	\$—	\$ (3.6 )	\$773.7
CanExel® siding	49.4	—	—	—	—	—	49.4
OSB	66.9	1,290.2	22.6	131.7	—	—	1,511.4
LVL	—	—	144.4	—	—	—	144.4
LSL	—	—	46.8	—	—	(0.1 )	46.7
I-joist	—	—	116.9	—	—	(0.1 )	116.8
Plywood	—	—	25.1	—	—	—	25.1
Other	10.1	12.3	10.1	3.9	30.0	—	66.4
Total Sales	\$884.0	\$1,302.5	\$365.9	\$ 155.3	\$30.0	\$ (3.8 )	\$2,733.9

For the year ended December 31, 2016

	Siding	OSB	EWP	South America	Other	Inter-segment	Total
SmartSide® siding	\$657.7	\$—	\$—	\$ 19.6	\$ —	\$ (1.5 )	\$675.8
CanExel® siding	43.1	—	—	—	—	—	43.1
OSB	42.6	1,016.3	10.8	112.3	—	(5.8 )	1,176.2
LVL	—	—	121.9	—	—	—	121.9
LSL	—	—	37.8	—	—	—	37.8
I-joist	—	—	99.4	—	—	—	99.4
Plywood	—	—	15.8	—	—	—	15.8
Other	8.9	11.4	11.2	5.0	26.9	—	63.4
Total Sales	\$752.3	\$1,027.7	\$296.9				