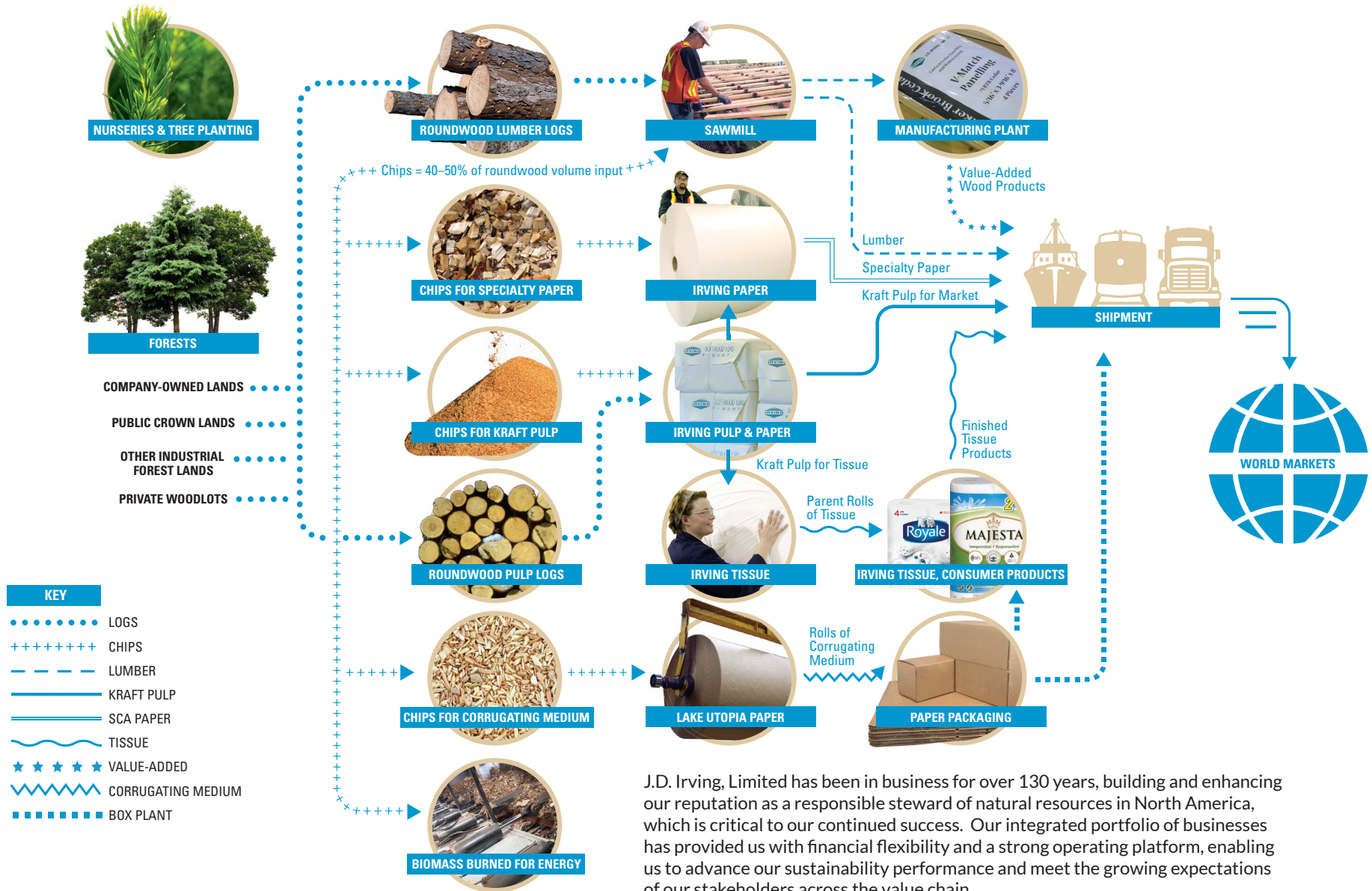




# J.D. Irving, Limited Sustainability Report 2013

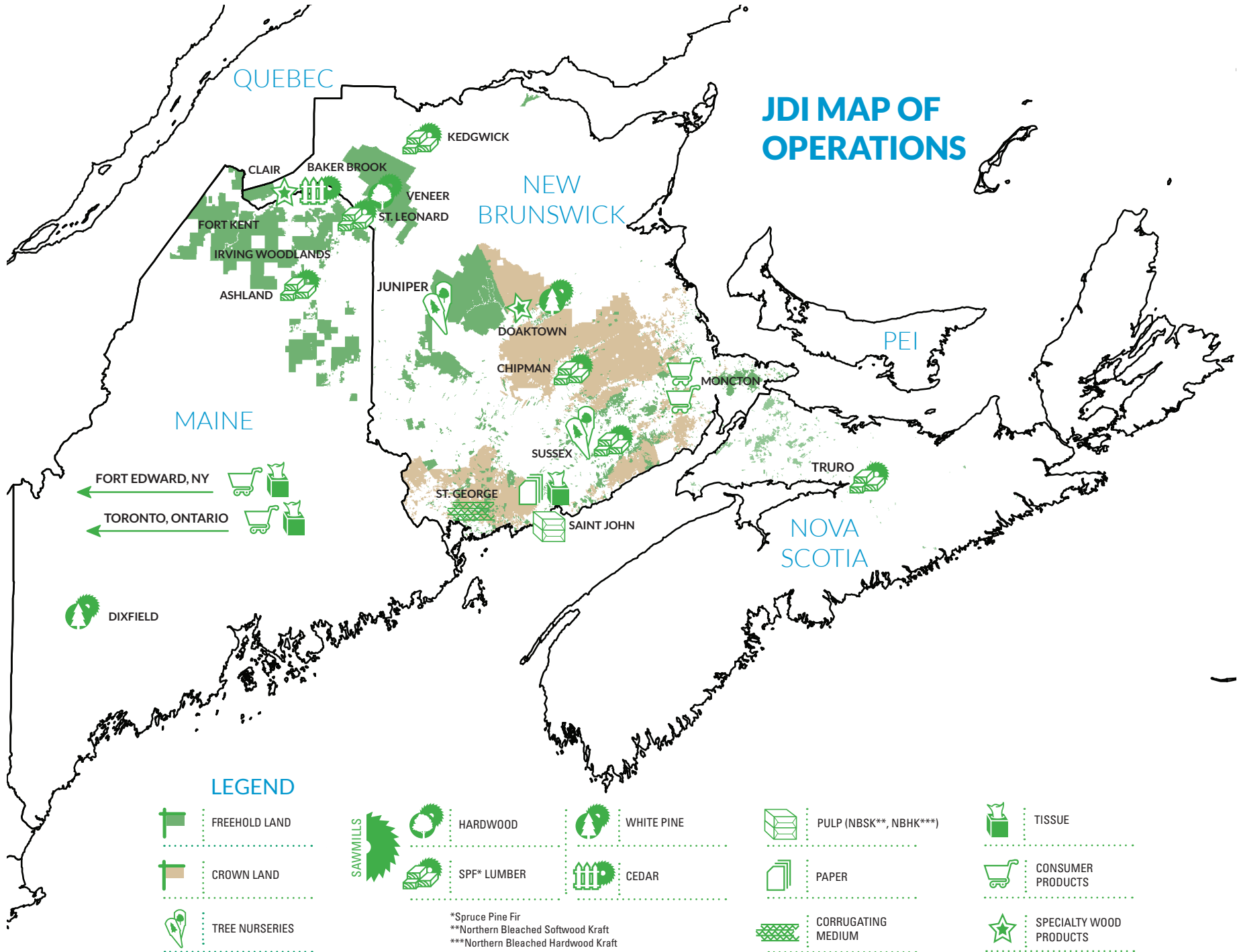


# J.D. Irving, Limited (JDI) Value Chain



J.D. Irving, Limited has been in business for over 130 years, building and enhancing our reputation as a responsible steward of natural resources in North America, which is critical to our continued success. Our integrated portfolio of businesses has provided us with financial flexibility and a strong operating platform, enabling us to advance our sustainability performance and meet the growing expectations of our stakeholders across the value chain.

# JDI MAP OF OPERATIONS



## Message from the Chief Executive Officers

As leaders of a forestry and forest products company, we understand that our business success is highly dependent on the strength of our sustainability performance. We know that investing in the forest and our forest communities allows us to provide a stable, long-term supply of the wood fibre we require to serve our customers.

**Our Performance:** In 2013, we made solid progress on improving our sustainability performance, while understanding the challenges that remain ahead of us.

Our people have played a key role in our progress, helping us to achieve our sustainability commitments while strengthening our business and competitive position. We are proud of our employee retention and engagement rates and we remain committed to developing the skills and leadership potential of our people. We understand that by providing meaningful career development opportunities for our employees, we are often also supporting their personal goals to maintain their local community roots.

We are continuing to build our safety culture and our performance improved in 2013 as we shared best practices across the organization. Our lost-time accident rate improved by 3.5% over our performance rate in 2012. Our Dixfield Sawmill successfully adopted the SafeStart® program, achieving one year of no lost-time accidents and reducing its recordable incident rate (RIR) by 11%. SafeStart® is now

being rolled out across the J.D. Irving Group of Companies. Our short-term goal remains to achieve industry top-quartile safety performance, as reflected in an RIR of 1.9 or less.

We maintained steady progress on improving our environmental performance during the year – with our greenhouse gas (GHG) emissions and water consumption levels remaining stable during a year of record production. One exception was a significant increase in sulphur dioxide emissions, which was a result of fuel switching from natural gas to oil during the winter of 2013, when natural gas prices increased 20 to 30 fold. Our sites have the built-in capacity to enable a nimble switch between the fuel types, allowing us to maintain our customer pricing levels.

Additionally, in 2013:

- we maintained a leading employee retention rate of 96.3% including retirements, and we hired 372 individuals during the year;
- 219 front line employees in our Forest Products Division received leadership development training;
- we increased diversion rate due to significant capital investments at our Irving Tissue operation in Toronto, where we successfully diverted the majority of our renovation waste. Including this investment, we diverted 309,245 tonnes of waste from landfill, significantly improving our total diversion rate from 76% in 2012 to 90% in 2013;
- under JDI's Unique Areas program, the number of conservation areas on land we own or manage grew from 923 in 2012 to 1,136 sites in 2013, representing a 23%

increase and a substantial commitment from our team;

- our local purchased wood increased 40% in 2013, helping us to achieve a 25-year record for private wood purchases. Additionally, we increased our overall level of local purchasing by 24% from over 3000 suppliers and contractors during the year;
- our capital investments to ensure efficient, environmentally progressive operations increased more than five-fold in 2013 over 2012; and,
- a University of New Brunswick study found that JDI forests are a significant carbon sink over the next 50 years. An important contributor to this result is JDI's almost 60-year commitment to tree planting, which crossed the 900 million mark in 2013.

### Our Business & Market Developments:

The economies of Canada and the United States gained further strength in 2013 and JDI achieved record production during the year. We recently made significant financial commitments, announced in March 2014, which will allow us to further grow and improve our forests, as well as our business:

- a \$450 million multi-year modernization program underway at our Irving Pulp and Paper mill in Saint John, New Brunswick will improve the overall efficiency of our pulp and paper operations, and further reduce JDI's air and noise emissions. This is the single largest investment in a pulp mill in Canada since 1993;
- we are investing \$38 million to modernize our sawmills in Chipman and Doaktown, New Brunswick; \$30 million to build a new state-of-the-art Softwood sawmill at

Ashland, Maine which opened in June 2014; and, \$16.8 million in the forests JDI owns in northern New Brunswick, as well as in upgrades to our sawmills in St. Leonard and Kedgwick; and,

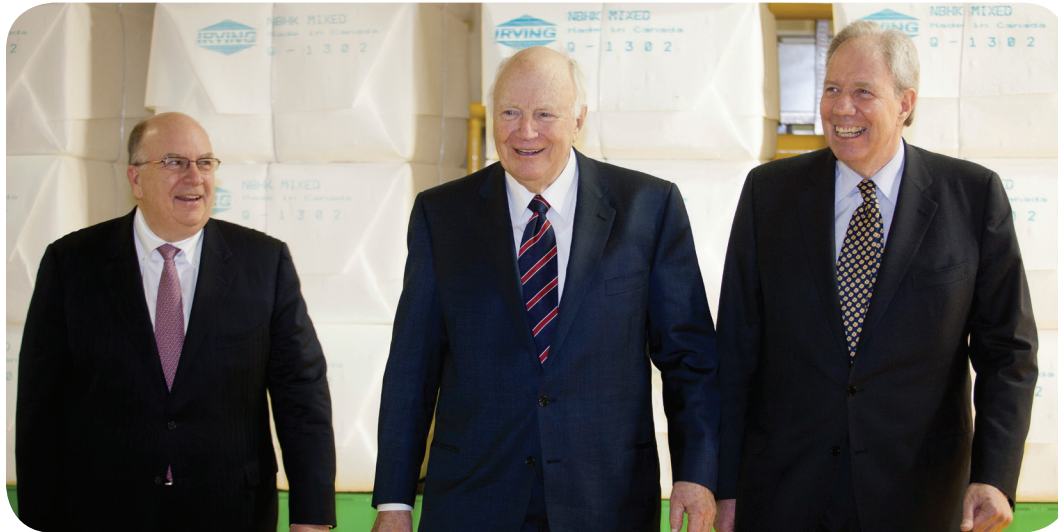
- we are building a new \$3.2 million state-of-the-art forest research and tree improvement lab in Sussex, New Brunswick. This will be the first large-scale advanced research centre in Canada, focused on a scientific discovery which enhances the seedlings' natural tolerance to insect pests. As a result, patents have been achieved. This scientific discovery has led to the achievement of patents in Canada, the U.S., Australia, Russia and Europe. Our partners in this ground-breaking initiative

are Natural Resources Canada, the Province of New Brunswick and the Atlantic Canada Opportunities Agency.

**Our New Sustainability Framework:** We have introduced a new framework for articulating our approach to managing key environmental, social and economic impacts, as well as our strategic priorities and commitments. This framework is built upon five focus areas of sustainability: **Healthy Environment, Safe and Efficient Operations, Growing and Engaging People, Strong Partnerships for Business Success, and Vibrant Communities.** Our 2013 report reflects these five focus areas, which you will learn more about in the following pages.

**Our Path Forward:** We remain actively engaged with the Government of New Brunswick on its new Crown forest policy, which encourages sustainable forest management practices and ongoing investments in the sector to maintain the province's global competitive position. In 2014, as per the five-year review cycle, we are renewing the 25-year Forest Management Agreement with the provincial government for JDI's forest operations on Crown land. We remain committed to applying the highest standards for forestry management to these lands. We are also preparing for the implementation of new Canadian federal regulations on emissions to air, which will cover our pulp and paper manufacturing operations.

Finally, we remain committed to expanding J.D Irving, Limited's sustainability reporting to the Company's other businesses. We believe that accounting for our performance not only drives improvements and enhances the overall resilience of our business, it helps us address the ongoing needs and expectations of our customers, our employees, our local communities and society at large.



Robert K. Irving, James K. Irving, and James D. Irving  
At the announcement of \$513 million investment in New Brunswick forestry and forest products operations (March 2014).

  
James D. Irving, Co-Chief Executive Officer

  
Robert K. Irving, Co-Chief Executive Officer

# Our Values and Approach to Sustainability

JDI's core values and approach to sustainability enable us to operate at the highest standards and to meet the evolving needs and expectations of our stakeholders.

**Our Approach to Sustainability:** While JDI's commitment and approach to managing our key environmental, social and economic impacts remains the same, our leadership team has introduced a new sustainability framework to better communicate our performance and capture the evolving and dynamic nature of our business. The approach is articulated below as a circular, interconnected framework, led by our core values.

**Report Scope:** This report summarizes the 2013 environmental, social and economic performance of JDI's forestry and forest products business in Canada and the United States. It is organized to reflect the focus areas of JDI's new sustainability framework and includes data from across our forestry and forest products Divisions – Pulp and Paper, Consumer Products, Sawmills, Woodlands and our Head Office. The content of this report is identified through an annual formal materiality

assessment which we conduct to help identify the aspects of our business that are of most interest to stakeholders. If you would like a more detailed review of our performance and materiality assessment, please consult our website at [www.jdirving.com](http://www.jdirving.com).

All financial data is in Canadian dollars unless otherwise noted.

## JDI's Sustainability Framework:

JDI Core Values
People & Teamwork
Quality Products & Service
Results Driven
Continuous Improvement & Innovation
Integrity
Fast & Flexible
Health, Safety & Environment
Customer Focus



## Performance at a Glance

JDI's key sustainability highlights for 2013 include:

- The Dixfield Sawmill successfully introduced the new SafeStart® program, achieving one year of no lost-time accidents and reducing its RIR by 11%.
- We maintained a leading employee retention rate in 2013. We hired 372 individuals and had a turnover rate of 3.7%, including retirements.
- A total of 219 of our frontline employees in the Forest Products Division received leadership development training.
- Under JDI's Unique Areas program, the number of conservation areas on land we own or manage grew by 23% from 923 in 2012 to 1,136 in 2013.
- We diverted 309,245 tonnes of waste from landfill, significantly improving our total diversion rate from 76% in 2012 to 90% in 2013.
- JDI spent approximately \$965 million with local suppliers (an increase of 24%), made payments of \$674 million in direct and indirect wages and benefits, and made capital investments of approximately \$244 million.
- JDI made a \$30 million investment to build a new state-of-the-art softwood sawmill at Ashland, Maine, providing customers with products that are environmentally certified under the Forest Stewardship Council® (FSC® C041515) or the Sustainable Forestry Initiative (SFI) programs.
- In total, our capital investments to ensure efficient, environmentally progressive operations increased more than five-fold in 2013 over 2012.
- A study conducted by the Faculty of Forestry and Environment Management at the University of New Brunswick found that JDI forests are a significant carbon sink over the next 50 years – meaning we absorb more carbon dioxide than we emit. JDI's almost 60-year commitment to tree planting, which crossed the 900 million mark in 2013.
- We are meeting the challenge of a 3-5% annual level of continuous improvement at our operations, as well as maintaining the gains we have realized through numerous efficiency projects and productivity initiatives.



## 2013 Sustainability Performance

### ENVIRONMENTAL

	2011	2012	2013
Greenhouse gas emissions from energy produced on site.....TONNES	311,629	318,872	321,000
Total direct energy usage..... GIGAJOULES	19,476,079	19,772,672	20,075,406
Renewable fuels used..... %	57.8	57.2	59.0
SO <sub>2</sub> emissions.....TONNES	640	688	1,221
Total waste diverted from landfill..... %	67	76	90*
Forest certification non-compliances..... #	1	7	1
Number of unique area sites protected..... #	829	923	1,136
Size of unique areas..... HECTARES	78,932	80,638	80,933
Mapped watercourse buffers..... HECTARES	193,880	192,270	192,270

### SOCIAL

Safety recordable incident rate..... # FOR EVERY 200,000 HOURS WORKED	5.3	4.2	4.6
Women in the workforce..... %	15.2	16.3	13.8
New hires..... #	204	325	372

### ECONOMIC

Capital investment.....\$MILLIONS	67	52	244
Total local purchases.....\$MILLIONS	834	779	965
Total employment income supported (direct and indirect).....\$MILLIONS	656	639	674

\*The capital investments made at our Irving Tissue operation in Toronto resulted in a 200,058 tonne increase in our total waste and an overall diversion rate of 90%. Without this one-time construction-related increase, our diversion rate was 81%.





## Healthy Environment

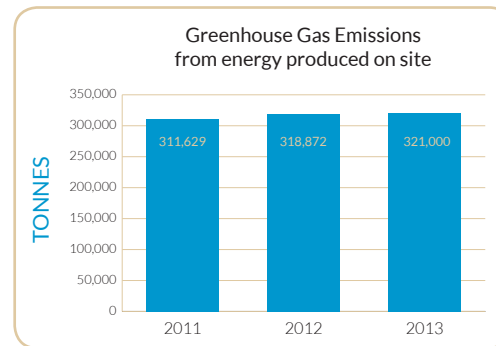
Our approach to sustainability is based on investing in the forest and forest communities with a long-term perspective, to ensure a stable, long-term supply of the wood fibre we require to build and maintain equally long-term relationships with our customers. We continually explore new ways to reduce our environmental footprint to maintain a healthy environment. We actively manage our impacts on air, water, biodiversity and land, and focus on improving our performance in these areas.

**Performance:** In 2013, our environmental performance remained stable, with our greenhouse gas (GHG) emissions and water consumption remaining consistent with 2012 levels. One exception to this performance was the significant increase in sulphur dioxide emissions to air, which was a result of fuel switching from natural gas to oil during the winter of 2013 when natural gas prices increased 20 to 30 fold and reached historic highs. In order to maintain our customer pricing levels, we were able to respond by having our sites switch over to fuel oil from natural gas.

We achieved a sharp decrease in the number of permit non-compliances – recording only one minor non-conformance during the year. This was due to our continued focus on advancing best practices, ongoing efforts

to minimize stream crossings and our forest planning activities. We increased the number of unique areas set aside for protection by 23% – from 923 to 1,136 sites. Since 2008, we have increased the total conservation area on land we own or manage by 11% or by 7,970 hectares.

At the community level, we reduced the number of odour complaints by 64% over the last three years, and we had no significant compliance issues affecting our neighbours.



### KEY INITIATIVES

#### Sustainable Forest Management

Our business depends on the long-term health of the forests. Our sustainable forest management practices require us to plan and forecast 80 years in order to responsibly sustain our forests for the future. This long-term timeline reflects a full life cycle of trees and encompasses analyses and forecasts, and continuous reinvestment in the business. Our efforts include research and conservation of a broad range of plants, animals and whole forest communities at different scales - from individual forest stands up to large landscapes. Some examples of our best practices include monitoring Atlantic salmon and Sea-run Brook trout and conducting fish habitat studies to help ensure healthy fish populations.



## THE LARGEST PRIVATE LAND CONSERVATION PROJECT IN ATLANTIC CANADA:

We are continuing our long-standing partnership with the Nature Conservancy of Canada, the nation's leading land conservation organization. Together, we have supported the largest private land conservation project in Atlantic Canada, preserving one of the most important river systems in Nova Scotia – the Tusket River Headwaters. Through a partial land purchase and donation involving JDI, the Nature Conservancy of Canada acquired 2,055 hectares (5,077 acres) of significant habitat in the Headwaters area of Digby County, NS. The site includes stands of both intact and regenerating Acadian forests. It has significant ecological value as it is home to the threatened snapping turtle, American eel and brook trout, and endangered birds such as the Canada warbler and olive-sided flycatcher. Endangered mainland moose are occasionally seen in the area as well.



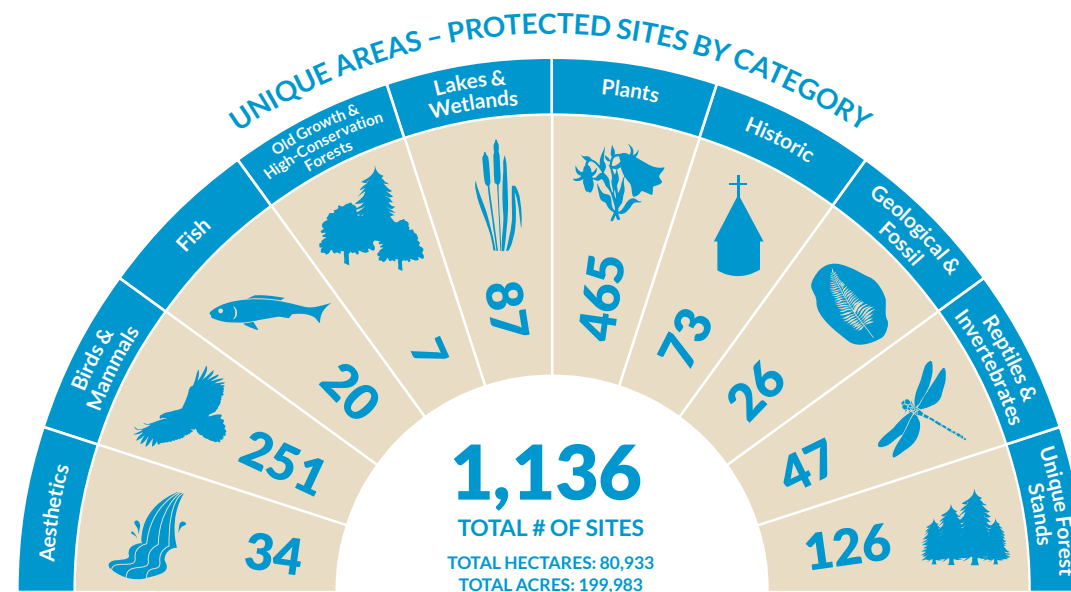
## Healthy Environment

### Carbon Sequestration

We recognize the importance of forests in sequestering carbon, and we conduct research to understand how forests absorb carbon dioxide (CO<sub>2</sub>) and mitigate climate change. In 2013, a two-year study conducted by the Faculty of Forestry and Environment Management at the University of New Brunswick found that JDI forests will sink – or absorb – about 92 million tonnes of carbon dioxide over the next 50 years. That's the

equivalent of the entire GHG emissions of the Maritime Provinces for one year or 18.4 million cars off the road for one year. The study took into account all of JDI's GHG emission sources – from the harvesting and trucking of wood from the forest through to the emissions from the manufacturing of forest products.

**Our Path Forward:** Our priorities include continuing to implement sustainable forest management practices and research climate change mitigation strategies.



 **2,355**  
Old Forest Sites

In addition, the company has an objective to designate and maintain old forest within the working forest landscape – to date more than 2,355 sites have been designated towards meeting this objective.



## Safe & Efficient Operations

Running safe and efficient operations means that we operate at the highest standards to ensure the protection of our employees and the public while continuously improving and innovating to enhance our productivity, reduce costs and improve our business performance.

**Performance:** In 2013, we continued to improve the overall level of safety and efficiency of our operations.

Our lost-time accident rate continued its decreasing trend from 1.2 in 2012 to 1.1 in 2013, due to ongoing safety initiatives such as safer tree planting, our Hazard Elimination Mitigation Incentive (HEMI) program, and increased management focus on best practices. Our recordable incident rate (RIR) increased slightly to 4.6. Our short-term goal remains to achieve an industry top-quartile safety performance, as reflected in an RIR of 1.9 or less.

Even as JDI's operations achieved record-setting production levels, our total direct energy consumption remained stable, increasing by only 1.5% over 2012 levels. In 2013, both our total waste and diversion rate increased due to significant capital investments at our Irving Tissue operation in Toronto, where we successfully diverted the majority of our renovation waste. Including this investment, we diverted 309,245 tonnes of waste from landfill, significantly improving our total diversion rate from 76% in 2012 to 90% in 2013.

During the year, we remained focused on achieving a 3-5% annual level of continuous improvement at our operations, as well as on the gains we have realized through numerous efficiency projects and productivity initiatives.

### KEY INITIATIVES

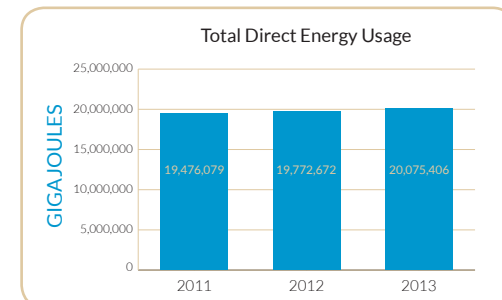
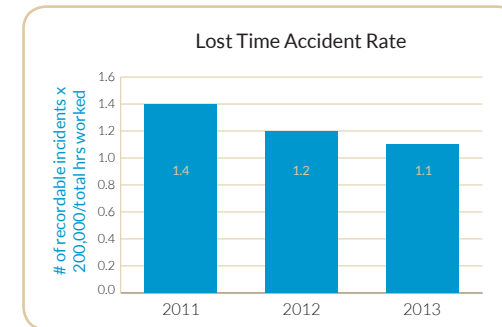
#### Implementation of SafeStart®

In 2013, the Dixfield Sawmill successfully piloted the new SafeStart® program, celebrating one year of no lost-time accidents and reducing its RIR by 11%. SafeStart® is now being adopted across the J.D. Irving Group of Companies.

#### Continuous Improvement Program

We continued to strengthen our business performance by advancing our continuous improvement program and by implementing key productivity and efficiency initiatives.

**Our Path Forward:** Our priorities include a scheduled rollout of the SafeStart® program across the J.D. Irving Group of Companies, and continuing to make capital investments to improve the efficiency of our operations, particularly the modernization of our pulp mill in Saint John, New Brunswick.





## Safe & Efficient Operations

### REDUCING CRITICAL ERRORS THROUGH SafeStart®:

SafeStart® is a safety training process for developing personal, 24/7 safety skills, and is used by more than 2,500 organizations in over 50 countries. It focuses on personal responsibility and reducing unintentional errors, rather than on rules, procedures and company enforcement. The piloted SafeStart® at Dixfield Sawmill and Irving Paper in 2013, using it as an additional tool to understand where errors can occur and how we can prevent them from happening in the first place. The SafeStart® program teaches our employees how to use critical error reduction techniques to help them avoid a critical error and ultimately avoid injuries. Our objective is to ensure that “everyone goes home safe”.



In 2013, Irving Paper surpassed its continuous improvement goal, realizing an annual improvement rate of 5%. As a result, Irving Paper was awarded the JK Irving Award for Continuous Improvement – the highest honour given in the J.D. Irving Group of Companies. The award is given out every three years to a business that demonstrates the full advantage of the Irving Management System.

### PERIFEDERS: EFFICIENTLY USING ENERGY WHILE INCREASING PRODUCTION

At Irving Paper, wood chips are converted into pulp using the Thermal Mechanical Pulping process (TMP). This process is very energy-intensive: approximately 70% of the electricity used at the paper mill is consumed by the TMP refiners. In 2013, the paper mill installed two new feed screw conveyors, known as PeriFeeders, to upgrade the feed system on two of its TMP refiners. **“These PeriFeeders replaced seven other pieces of equipment, reducing the electricity consumed by the feed system by 35%,”** said Irving Paper process engineer, **Suzanne Hohmann**. As a result of the upgrade, the reliability of the refiners themselves became more stable. The mill has substantially reduced TMP refining energy while increasing production by 10%.





## Growing & Engaging People

We recruit the best people, engage and develop them, and provide them with opportunities for safe, rewarding and fulfilling long-term employment.

**Performance:** We regularly conduct employee opinion surveys to help us assess and build employee engagement. In 2013, over 80% of employees surveyed felt highly engaged by the company, up slightly from JDI's previous survey in 2012. Employees indicated they were encouraged by the improvements to our leadership development program and recommended further enhancements to our employee recognition programs, which our leadership is already working to address.

In 2013, we hired 372 new people to our team, with 9% of those being hired at JDI's sawmills to support the sawmill in Ashland that is due to start up in 2014. We maintained a leading employee retention rate of 96.3% including retirements. In our Forest Products Division, 219 front line employees received leadership development training. During the year, we had one collective agreement come up for review at our Kedgwick Sawmill in New Brunswick. The Agreement was ratified.

### KEY INITIATIVES

#### Recruitment Program

Between 2014 and 2016, we plan to hire over 700 people to our forestry and forest products division. In 2013, our recruitment efforts took centre stage as we conducted extensive career



### INVESTING IN TALENT:

Monica Teakles began her career at JDI in 2005 as a summer student with Sussex Woodlands. After graduating with a Business Degree from University of New Brunswick, she was hired on full-time in human resources. JDI supported Monica's development through her Certified Human Resources (CHRP) designation and she advanced to the role of a Human Resources Generalist. Monica also completed the Leading Change and Predictive Index programs. She's currently enrolled in the Leadership Fundamentals program.

Monica made the switch from Human Resources to Operations and now works as a Relief Shift Supervisor at Lake Utopia Paper. As a new supervisor, Monica offers a fresh perspective when evaluating safety culture and Standard Operating Procedures. She's working on standardizing and sharing best practices between shifts.

**"I have been given so many opportunities which speaks volumes about JDI. This company truly sees their employees as talent and is willing to invest to help grow their careers."**





## Growing & Engaging People



fairs, extended our co-op recruitment program to focus on recruiting engineers, increased awareness of career opportunities with aboriginal communities, and launched a new recruitment marketing campaign. Our message to potential new recruits highlights JDI's values and roots in the community; our commitment to safety leadership; opportunities for career progression and development; and leadership opportunities for women and people of diverse backgrounds reflecting the changing demographics of our region.

### Training and Development

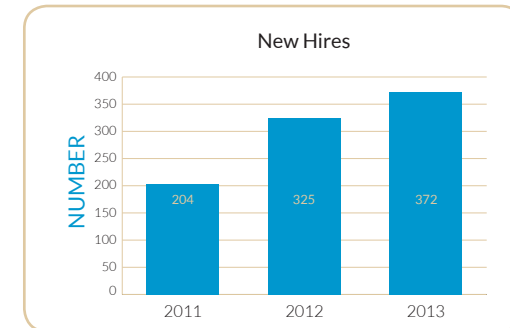
Our employee training and development initiatives include a Leadership Fundamentals Program, E-learning modules (ELM), ongoing maintenance of professional designations, and competency-based training focused on improving employee safety and efficiency. In 2013, we also conducted specific training related to our regulatory and governance

processes – in particular for our heavy manufacturing sites. We also offered harvester training and schooling sessions to our independent operating partners to support our future operating requirements. JDI is actively engaged with local universities and community colleges in providing co-op experience, case study competitions and the provision of scholarships to attract and recruit the workforce of the future.

**Our Path Forward:** In order to achieve our business goals, we will continue to build our team by providing them with the tools, training and development opportunities they need to succeed in today's competitive workforce – including ELM. We will continue to implement our three-year strategic workforce plan in order to achieve our 2016 hiring targets, and employ new social media strategies to help us engage with and attract the next generation of workers.



Student practices technique on harvesting simulator.





## Strong Partnerships for Business Success

We develop strong relationships with our customers and partners through innovation flexibility and superior customer service. In addition to our customer relationships we have partnerships with other businesses, universities, community organizations and non-profit organizations.

**Performance:** Our ability to thrive and grow alongside our customers and partners is enhanced our diversified and integrated business model. This provides us with financial flexibility and business resilience; the depth and strength of our supply chain; and, our commitment to product innovation.

Our integrated forest operations support over 1700 small and medium enterprises in over 250 communities. We increased our spending with local suppliers by almost 24% and our local purchased wood increased 40% in 2013, helping us to achieve a 25-year record for private wood purchases.

### KEY INITIATIVES

#### Strengthening Partnerships

We are continuing to strengthen our business partnerships in order to meet the growing demands of our customers. Pulp from our Irving Pulp and Paper mill in Saint John and corrugated medium from Lake Utopia Paper, near St. George, are now being shipped through the multi-modal transportation hub at the Port of Saint John. This hub provides us with a weekly container service to ship Latin and

South America, allowing us to better serve our valued customers and reach global markets more efficiently.

#### Product Innovation

A key product innovation comes from our collaboration with Carleton University professor Dr. J. David Miller to explore techniques to protect forests from damage caused by the spruce budworm. Dr. Miller discovered that exposing trees grown in JDI nurseries to endophytes – fungi found inside of plants – can improve their resistance to the spruce budworm. This discovery has resulted in patents in North America, Europe, Russia and Australia. The commercialization potential



Dr. J. David Miller

of this ground-breaking science could reduce pesticide use over time.

JDI forestry and forest products operations are regularly inspected by accredited independent auditors, including KPMG – on the status of our ISO 14001 registration and the Sustainable Forestry Initiative (SFI®) certifications – and provincial regulators in New Brunswick and Nova Scotia.

Additionally, our Maine woodlands are certified to the Forest Stewardship Council's (FSC) US Forest Management Standard, which is a National Standard pertaining to forest management in the United States.

Third Party Certification	2011	2012	2013
			All forests owned or managed and IPP, IPL, ITC (Saint John) & LUP
			All forests owned or managed
			All Maine woodlands



### **PARTNERING WITH OUR CUSTOMERS:**

Irving Paper has US-based Technical Field Service Representatives strategically located to give world-class customer service to all of our print customers. The team focuses on continuing to improve the print reproduction of our graphic paper grades in over 100 pressroom locations. The field service group also provides rapid response to resolve transportation and quality issues, and relays improvement opportunities back to the mill.



## **Strong Partnerships for Business Success**



**Our Path Forward:** We are committed to making investments that support the long-term viability of our business. We will continue to pursue initiatives related to sharing best practices, diversifying our product offering, continued improvement to customer service and ongoing delivery efficiency.

We will continue our engagement in the FSC review process. This will help standardize the numerous FSC regional standards now in place across the country and result in a more competitive playing field for all players in the forestry sector.



### **RIDING THE RAILS:**

Our increasing use of railcars to transport Irving Paper's finished products to market is paying off – for our customers, for the environment and for our bottom line. We have made substantial investments to upgrade the rails we own and operate in order to safely carry the weight now allowed by regulators, who recently increased the carrying limits from 74 tonnes to 82.5 tonnes per rail car. With 500 fewer rail cars being hauled each year, the change has had a positive impact on the environment. The reduction of 500 rail cars by Irving Paper meant a 31,000 tonnes reduction in GHGs. We continue to search for similar initiatives that improve our overall business resilience, efficiency and financial flexibility of our operations.







## Vibrant Communities

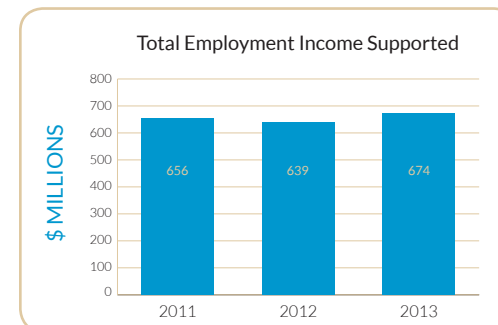
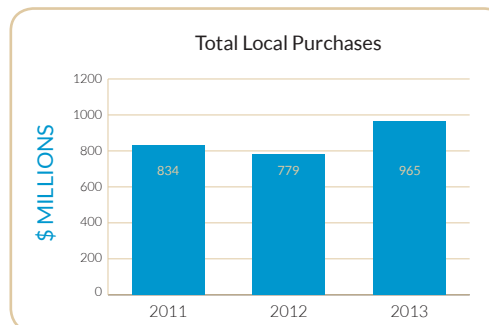
We actively engage communities and stakeholders where we operate to understand their needs, partner with them to achieve mutual goals and contribute to their success by giving back where the needs are greatest – in the areas of poverty, education, health and wellness, and the environment.

**Performance:** In 2013, JDI made significant contributions to the economy to help build vibrant local communities. Our forestry and forest products business in Canada and the United States supported approximately 4,000 full time employees, while indirectly we employed approximately 7,000 workers through suppliers of goods and services to our business. Together, direct and indirect employment accounted for \$674 million in wages and benefit payments. During the year, we increased our spending with local suppliers by almost 24% to \$965 million. We also made capital investments of \$244 million in our business and significant investments in innovative environmental, education, community and health initiatives.



### Volunteering time, skill and supplies to Habitat for Humanity:

Employees from our JDI Truro Sawmill volunteered their time and skills to build a house for a local family of four, while the JDI Sawmill Division donated the lumber and Irving Tissue donated a six-month supply of bathroom tissue to the family. **“We’re really proud to help those in need in our community,”** said Christian Gilbert, Spruce Sales Manager, JDI Sawmills Division. “This has been a joint collaboration with the Sustainable Forestry Initiative (SFI) – a world leader in forest certification.”



## A LIFETIME OF COMMITMENT:

In 2013, J.K. Irving, Chairman of JDI, was honoured with a Lifetime Achievement Award from the Learning Partnership for his lifelong commitment to the youth of New Brunswick. Under Mr. Irving's leadership, JDI has committed over 13 years, 300 volunteers and almost 30,000 hours of volunteer time with local schools through our Partners Assisting Local Schools (PALS) program, which brings together employees, community and school staff to improve education. The Learning Partnership is a national charitable organization dedicated to championing a strong public education system in Canada through innovative programs, credible research, policy initiatives, executive leadership and public engagement.



## KEY INITIATIVES

### Purchasing Local

In the 2013 operating year, over 650 private woodlot owners helped us achieve a 25-year record for private wood purchases. Our mills purchased 682,000m<sup>3</sup> of New Brunswick private wood – the largest volume since 1989. We plan to exceed that record in 2014, with our intention to purchase more wood from private woodlot owners and wood producers than we did last year.

### Supporting Health Research

In 2013, JDI proudly contributed \$2 million in funding toward the first endowed occupational medicine research chair in Canada – Dalhousie Medicine New Brunswick's Medical Research Campaign to establish the J.D. Irving, Limited Research Chair in Occupational Medicine.

Establishing this research Chair underscores JDI's commitment not only to the health and safety of our employees, but to the health and safety of all workers in New Brunswick and the Maritimes.

**Our path forward:** We remain committed to creating value for the benefit of all our stakeholders by investing in our business, local suppliers, employees, and in our local communities. Specifically, our goal in 2014 is to exceed our record of purchases from private woodlot owners and maintain our level of social investments in our local communities.

# JDI Forest Products Scorecard

## ENVIRONMENTAL

	2011	2012	2013	
<b>SUSTAINABLE FORESTRY</b>				
Woodlands land base .....	HECTARES	2,401,000	2,388,000	2,375,000
Land base harvested (Crown) .....	%	1.3	1.2	1.1
Land base harvested (freehold) .....	%	1.9	1.9	1.8
Trees planted .....	# OF SEEDLINGS	28,124,474	19,161,244	24,802,323
Wood harvested .....	TONNES	6,586,902	6,744,791	6,297,344
Actual harvest levels (Crown) .....	M <sup>3</sup> /HA/YR	1.4	1.4	1.5
Sustainable harvest levels (Crown) .....	M <sup>3</sup> /HA/YR	1.4	1.4	1.3
Actual harvest levels (freehold) .....	M <sup>3</sup> /HA/YR	2.2	2.3	2.1
Sustainable harvest levels (freehold) .....	M <sup>3</sup> /HA/YR	2.2	2.2	2.1
Average annual growth of the forest .....	M <sup>3</sup> /HA/YR	(new indicator in 2012)	2.2	2.1
Forest lost from all causes (disease, windthrow, fire) .....	% OF FOREST UNDER MANAGEMENT	0.0129	0.0278	0.0004
Mapped watercourse buffers (total) .....	HECTARES	193,880	192,270	192,270
Watercourse distances under management (total) .....	KM	27,600	27,422	27,422
Ability to successfully reforest (tree planting - second year survival rates) .....	% SURVIVING/YR	90	91	91
Total forest management audits .....	# OF NON-COMPLIANCES	4/140	3/143	2/143
Stream crossings .....	% COMPLIANCE	100	100	100
<b>BIODIVERSITY</b>				
Volunteer conservation areas on JDI land .....	HECTARES	78,932	80,638	80,933
<b>WATER</b>				
Water usage .....	M <sup>3</sup>	65,755,870	65,501,158	64,860,806
Biological oxygen demand (BOD) .....	TONNES	3,750	3,666	4,148
Total suspended solids (TSS) .....	TONNES	6,811	6,201	6,909

## JDI Forest Products Scorecard

	2011	2012	2013
<b>SOLID WASTE</b>			
Total waste..... TONNES	132,940	132,135	335,348
Landfill .....%	33	24	9
Waste diverted (recycled or reused).....%	67	76	90
Hazardous waste .....%	0.10	0.08	0.08
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen)..... TONNES	1,447	1,481	1,459
SOx (oxides of sulfur) ..... TONNES	640	688	1,221
Dust Total Particulate Matter (TPM) ..... TONNES	3,038	2,387	2,442
<b>CLIMATE CHANGE</b>			
Total GHG emissions (direct & indirect) ..... CO <sub>2</sub> e (carbon dioxide equivalent) TONNES	1,272,820	1,262,020	1,257,292
<b>ENERGY</b>			
Total energy used ..... GIGAJOULES	25,865,198	26,177,893	26,453,528
Direct energy (produced on site) ..... %	75	76	76
Purchased electricity ..... %	25	24	24
Renewable fuels ..... %	58	57	59
Nonrenewable fuels ..... %	42	43	41
<b>ENVIRONMENTAL COMPLIANCE</b>			
Odour complaints..... #	25	16	13
Permit non-compliances..... #	1	7	1

# JDI Forest Products Scorecard

SOCIAL	2011	2012	2013
Number of employees .....# FULL-TIME EQUIVALENTS	3,794	3,850	4,033
Recruitment .....% OF EMPLOYEES JOINING THE COMPANY	5.4	8.4	9.2
DIVERSITY			
Women in the workforce .....%	15.2	16.3	13.8
Women in executive positions .....%	17	17	17
HEALTH AND SAFETY			
Fatalities ..... #	0	0	0
Recordable incident rate...# OF RECORDABLE INCIDENTS X 200,000/TOTAL HOURS WORKED	5.3	4.1	4.6
Lost time accident rate.....# LOST TIME ACCIDENTS X 200,000/TOTAL HOURS WORKED	1.4	1.2	1.1
ECONOMIC BENEFIT			
Capital investment..... \$ MILLIONS	67	52	244
Total local purchases..... \$ MILLIONS	834	779	965
Total employment income supported ..... \$ MILLIONS	656	639	674

<sup>1</sup> Includes good and services, wood purchases and payments to woodlands contractors

# Irving Paper Scorecard

	2011	2012	2013
<b>ENVIRONMENTAL</b>			
Production .....	400,604	410,541	401,539
Products available with SFI or FSC Chain of Custody .....	69	64	75
<b>WATER</b>			
Water usage .....	12,535,802	12,180,611	12,302,291
Water usage .....	31.3	29.7	30.6
Biological oxygen demand (BOD) .....	730	622	646
Total suspended solids (TSS) .....	2,944	2,398	2,763
<b>ENERGY</b>			
Total energy consumption (direct & indirect) .....	5,877,159	6,103,260	6,059,714
<b>ENERGY MIX</b>			
Renewable energy use .....	15	14	14
Nonrenewable energy use .....	85	86	86
<b>CLIMATE CHANGE</b>			
Total GHG emissions (direct & indirect) .....	744,972	760,072	744,642
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen) .....	102	103	108
SOx (oxides of sulfur) .....	0.4	0.5	25.9
Dust Total Particulate Matter (TPM) .....	6	6	8
<b>ENVIRONMENTAL COMPLIANCE</b>			
Odour complaints .....	0	0	0
Permit non-compliances .....	0	0	0
<b>SOLID WASTE</b>			
Total waste* .....	53,628	49,302	51,404
Waste diverted (recycled or reused) .....	99.2	99.0	99.1
Waste to landfill .....	0.82	1.03	0.90
<b>SOCIAL</b>			
Number of employees .....	319	313	311
<b>HEALTH &amp; SAFETY</b>			
Recordable incident rate .....	2.2	2.8	2.4
Lost time accident rate .....	1.7	2.5	0.9

\*Irving Paper produces no hazardous waste

# Irving Pulp & Paper Scorecard

	2011	2012	2013
<b>ENVIRONMENTAL</b>			
Production .....	325,399	330,527	335,534
Products available with SFI or FSC Chain of Custody .....	87	81	76
<b>WATER</b>			
Water usage .....	37,090,400	38,634,893	38,063,833
Water usage .....	114	117	113
Biological oxygen demand (BOD) .....	2,461	2,480	2,825
Total suspended solids (TSS) .....	2,755	2,710	3,061
<b>ENERGY</b>			
Total energy consumption (direct & indirect) .....	11,457,784	11,826,070	12,111,339
<b>ENERGY MIX</b>			
Renewable energy use .....	89	91	91
Non-renewable energy use .....	11	9	9
<b>CLIMATE CHANGE</b>			
Total GHG emissions .....	94,987	80,904	94,599
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen) .....	884	929	891
SOx (oxides of sulfur) .....	400	409	912
Dust Total Particulate Matter (TPM) .....	152	56	105
<b>ENVIRONMENTAL COMPLIANCE</b>			
Odour complaints .....	2	6	3
Permit non-compliances .....	1	3	0
<b>SOLID WASTE</b>			
Total waste* .....	32,178	27,604	28,132
Waste to landfill .....	1.4	1.9	2.3
Waste diverted (recycled or reused) .....	99	98	98
<b>SOCIAL</b>			
Number of employees .....	337	343	343
<b>HEALTH &amp; SAFETY</b>			
Recordable incident rate .....	2.5	3.8	3.9
Lost time accident rate .....	0.3	1.0	1.0

\*Irving Pulp & Paper produces no hazardous waste

# Lake Utopia Paper Scorecard

	2011	2012	2013
<b>ENVIRONMENTAL</b>			
Production .....	180,779	172,647	186,425
Amount of recycled input materials .....	64,191	61,803	62,595
<b>WATER</b>			
Water usage .....	5,812,381	5,813,132	5,853,925
Water usage .....	36	29	32
Biological oxygen demand (BOD) .....	212	218	292
Total suspended solids (TSS) .....	260	272	268
<b>ENERGY</b>			
Total energy consumption (direct & indirect) .....	1,894,362	1,851,316	1,780,202
<b>ENERGY MIX</b>			
Renewable energy use .....	41	23	18
Non-renewable energy use .....	59	77	82
<b>CLIMATE CHANGE</b>			
Total GHG emissions .....	109,341	108,148	110,818
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen) .....	161	169	162
SOx (oxides of sulfur) .....	197	244	243
Dust Total Particulate Matter (TPM) .....	15	7	5
<b>ENVIRONMENTAL COMPLIANCE</b>			
Odour complaints .....	23	10	10
Permit non-compliances .....	0	4	1
<b>SOLID WASTE</b>			
Total waste* .....	18,150	18,843	19,191
Waste to landfill .....	18	14	19
Waste diverted (recycled or reused) .....	82	86	81
<b>SOCIAL</b>			
Number of employees .....	136	140	138
<b>HEALTH &amp; SAFETY</b>			
Recordable incident rate. ....	1.4	3.3	5.5
Lost time accident rate. ....	0.7	2.0	0.0

\*Lake Utopia Paper produces no hazardous waste



# Irving Tissue Scorecard

	2011	2012	2013
<b>ENVIRONMENTAL</b>			
<b>WATER</b>			
Water usage .....	10,317,287	8,872,522	8,640,757
Water usage .....	49	43	42
Biological oxygen demand (BOD) .....	347	346	385
Total suspended solids (TSS) .....	852	821	817
<b>ENERGY</b>			
Total energy consumption (direct & indirect) .....	3,915,665	3,844,518	3,689,167
<b>ENERGY MIX</b>			
Renewable energy use .....	22	23	31
Non-renewable energy use .....	78	77	69
<b>CLIMATE CHANGE</b>			
Total GHG emissions .....	228,625	222,409	207,060
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen) .....	85	82	77
SOx (oxides of sulfur) .....	1.7	1.2	0.2
Dust Total Particulate Matter (TPM) .....	0	0	0
<b>ENVIRONMENTAL COMPLIANCE</b>			
Odour complaints .....	0	0	0
Permit non-compliances .....	0	0	0
<b>SOLID WASTE</b>			
Non-hazardous waste .....	7,358	6,221	207,269*
Non-hazardous waste to landfill .....	38	32	1
Non-hazardous waste diverted (recycled or reused) .....	62	68	99
Hazardous waste .....	79	85	233
<b>SOCIAL</b>			
Number of employees .....	1055	1053	1053
<b>HEALTH &amp; SAFETY</b>			
Recordable incident rate .....	3.2	2.0	2.0
Lost time accident rate .....	0.8	1.0	1.0

\*One time event, Toronto Tissue Mill expansion.

## Sawmills Scorecard

	2011	2012	2013
<b>ENVIRONMENTAL</b>			
Lumber production ..... MFBM	741,135	778,773	821,308
<b>ENERGY</b>			
Total energy consumption (direct & indirect) .....GIGAJOULES	2,720,229	2,552,729	2,813,106
<b>ENERGY MIX</b>			
Renewable energy use.....%	81	80	80
Non-renewable energy use.....%	18	18	18
<b>CLIMATE CHANGE</b>			
Total GHG emissions..... CO <sub>2</sub> e (carbon dioxide equivalent) TONNES	94,895	90,487	100,173
<b>AIR EMISSIONS</b>			
NOx (oxides of nitrogen).....TONNES	215	198	221
SOx (oxides of sulfur).....TONNES	41	34	
Dust Total Particulate Matter (TPM).....TONNES	2,865	2,318	2,324
<b>SOLID WASTE</b>			
Total waste..... TONNES	42,586	50,501	56,540
Non-hazardous waste to landfill..... %	87	51	45
Non-hazardous waste diverted (recycled or reused)..... %	13	49	55
Hazardous waste.....%	0.1	0.1	0.1
<b>SOCIAL</b>			
Number of employees .....FULL-TIME EQUIVALENTS	1,225	1,212	1,188
<b>HEALTH &amp; SAFETY</b>			
Recordable incident rate...# OF RECORDABLE INCIDENTS X 200,000/TOTAL HOURS WORKED	8.9	7.2	7.8
Lost time accident rate.....# OF LOST TIME ACCIDENTS X 200,000/TOTAL HOURS WORKED	2.6	2.1	2.3

## Our Products & Business

The forestry and forest products business of JDI produces a wide range of products with the aim of maximizing the economic value of all parts of the trees we harvest.

Our products, which originate in Atlantic Canada, Ontario, New York State, and Maine, are sold and used in markets around the world.



DIVISION	BRAND	PRODUCT	MARKET AND CONSUMERS
Consumer Products	MAJESTA	Tissue	MAJESTA, a full line of bathroom tissue, towels and facial tissues focused in Canada with a promise to plant 3 trees for every one used.
	Royale	Tissue	A leading Canadian household paper brand focusing on premium bathroom tissue, facial tissue, paper towels and napkins.
	Scotties	Tissue	The Scotties brand is a key retail brand focused on the U.S. facial tissue market with a promise to plant 3 trees for every one used.
	Private Label	Tissue	We provide premium, private-label paper products to many high-profile retailers across North America.
Pulp & Paper	Opulence	SCA++	Our Super Calendar (SC) papers are used for a variety of products, such as magazines, catalogs, flyers and inserts. Our main markets are Canada and the United States.
	Radiance	SCA+	
	Irving SCA	SCA	
	Irving Ultra	SCB	
	Corrugating Medium	Corrugating Medium	Our corrugating medium is sent to box plants globally.
	Softwood Kraft Pulp	Pulp	Our kraft pulp is used primarily for tissue manufacturing and serves a global marketplace.
	Hardwood Kraft Pulp	Pulp	
Sawmills	Softwood	Lumber	Our lumber can be found globally in a wide range of home construction, renovation and industrial applications including fencing, flooring, cabinets, furniture, pallets, railroad ties and retail building supply.
	Eastern White Pine	Lumber	
	Hardwood	Lumber	
	Eastern White Cedar	Lumber	

<sup>1</sup> Thousands of feet board measure



**J.D. IRVING, LIMITED**

We value your opinion. To provide feedback on this report, please contact  
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