



J.D. IRVING, LIMITED

2024

J.D. Irving, Limited Forest Supply Chain
*Climate, Conservation &
Community Impact Report* - July 2025

CONTENTS

INTRODUCTION

In Memoriam.....	5
A Message From Our Co-CEOs.....	6
About Us.....	8
About This Report	9
Our Performance	12

ENVIRONMENT

Sustainable Forest Management.....	20
Forest Conservation & Biodiversity.....	36
Air & Water Quality Management.....	48
Climate Change Action & Adaptation	56

SOCIAL

Safety.....	72
Community Engagement.....	78

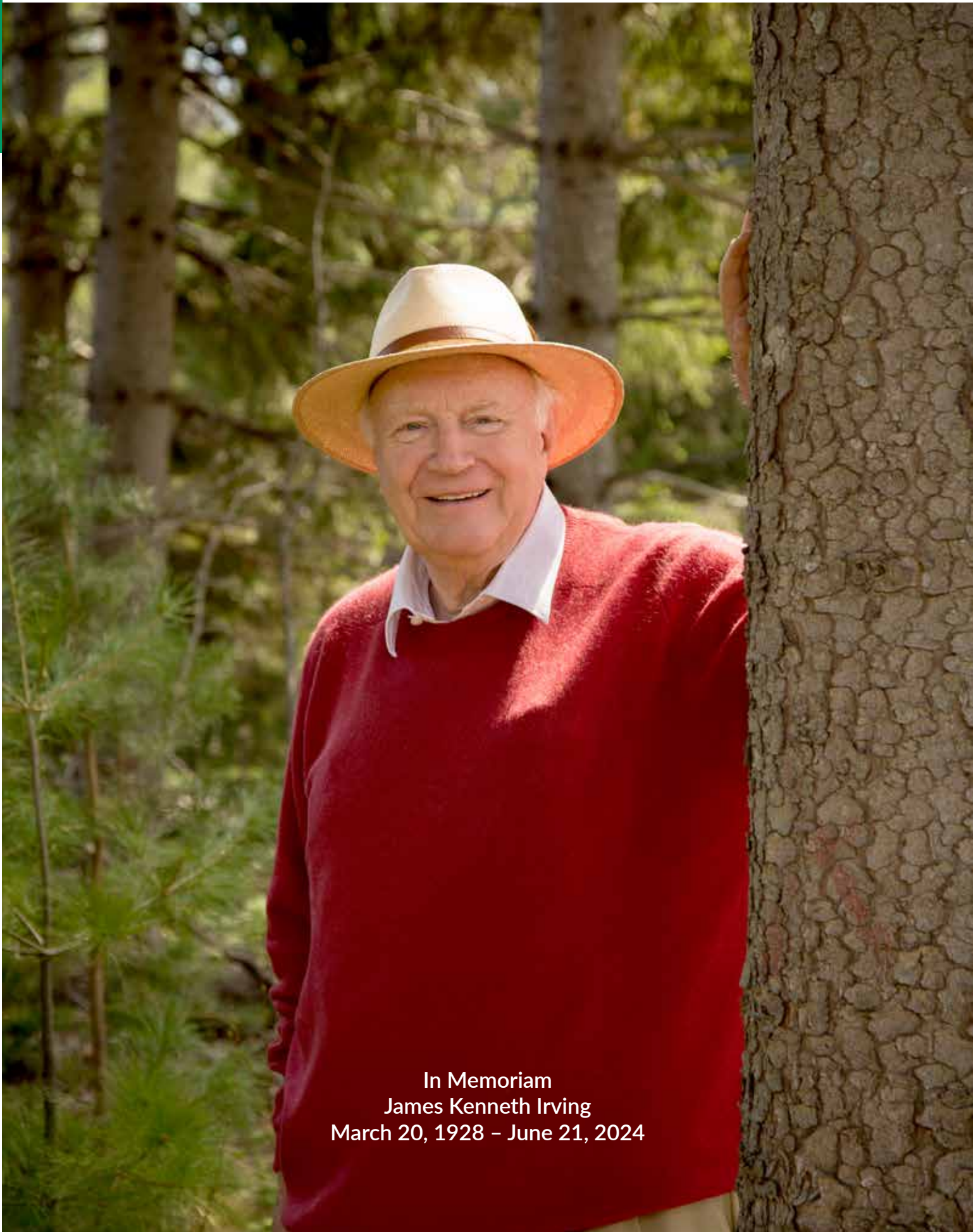
GOVERNANCE

Ethics, Values & Integrity	88
Governance & Materiality.....	94

APPENDIX

Maps.....	101
TCFD Reference Table.....	102
GRI and SASB Content Indexes.....	104
Limited Assurance Verification	
Statement	110
2024 Performance Data Table.....	115
Endnotes.....	141





In Memoriam
James Kenneth Irving
March 20, 1928 – June 21, 2024

IN MEMORIAM

James Kenneth Irving

March 20, 1928 - June 21, 2024

James Kenneth (JK) Irving was a proud Canadian and New Brunswicker leading J.D. Irving, Limited in a career that spanned 76 years. In life, community and business, his energy, drive, and enthusiasm – for seeing ideas grow and making a difference – were contagious.

His career started early, selling magazines at the age of 10 and working alongside his brothers as part of the Jim, Art, and Jack Farm, located in the backyard barn of their home in Saint John. They sold eggs, chickens, and garden produce to their neighbours.

He was humble in his achievements and described himself first and foremost as a lumberman. His career began with the log drives on the Saint John River. He believed the essential ingredient of success was a great team of people and until the end he was happiest engaging with them

throughout the businesses. Action and innovation were prized virtues. “You learned how to do something by doing it, and making it better was the best reason for getting up in the morning.”

He was driven about the details and understood that personal ownership of a job delivered better quality and teamwork. He valued loyalty and kept the promise of a handshake.

While much has changed in what was a 76-year career at J.D. Irving, Limited, for JK the fundamentals learned from his father remained constant: work together to build a great team, produce excellent products, give superior service, always look after the customer, and reinvest in the future.



Jim Irving
Co-CEO



Robert Irving
Co-CEO

A MESSAGE FROM OUR CO-CEOS

Every time we plant a tree, it's with the future in mind. We're already seeing the working forest work for our climate, for conservation and for our communities. Making sure it continues to do so for future generations starts with the work that we do today.

We know it takes a great team working together to make it happen. We've highlighted some of our team members within these pages, but we want to acknowledge the hard work and commitment of all our people. Without them the achievements of 2024 would not be possible.

Last year marked significant milestones in renewable energy across our Forest Supply Chain. We received regulatory approval for two projects that will go a long way to decarbonize the New Brunswick electrical grid. Project NextGen is a generational upgrade to our pulp mill in Saint John, N.B. that will make it a top performer worldwide in both kraft pulp production and environmental performance. Over in western New Brunswick, our Brighton Mountain Wind Farm project will generate renewable energy that will help power local communities. Both projects break ground in 2025.

Throughout the entire Forest Supply Chain, we continue efforts to improve energy efficiency and boost our environmental performance. By following sound principles like growing more wood than we harvest, our Forest Supply Chain remains

beyond carbon neutral. This means more carbon is captured in the growing forest and stored long-term in wood products than is emitted.

Last year we also celebrated several significant anniversaries across our operations. These included 25 years for Clair Value-Added, 20 years for our Kedgwick Sawmill, 10 years for our Ashland Sawmill and five years for Grand River Pellets. In January, we welcomed Cobleskill Value-Added in Cobleskill, N.Y. to our team, and in November, we marked Irving Tissue's fifth anniversary in Macon, Ga. by announcing a \$600-million expansion project. We want to thank all employees past and present who've helped with the success of these businesses over the years.

This is the fifth edition of our annual Climate, Conservation and Community Impact Report and represents our ongoing commitment to these three pillars. Careful stewardship of the forests we manage will make sure the working forest will continue to work in areas like renewable energy, biodiversity, jobs and local economies for generations to come.

The work that we accomplished in 2024 sets down roots for the future. We look forward to another year of working together as a team to find a better way every day.


Jim Irving
Co-CEO


Robert Irving
Co-CEO

ABOUT US

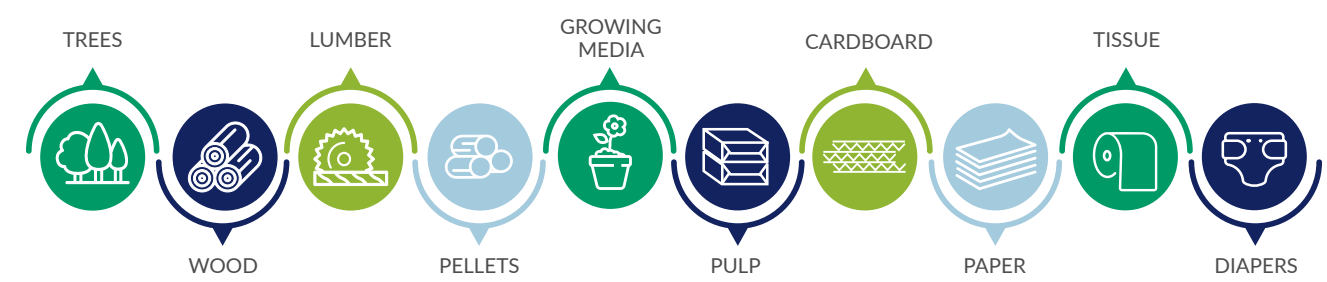
Since 1882, J.D. Irving, Limited has been committed to developing and delivering quality products and services. With head offices in Saint John and Moncton, New Brunswick and more than 19,000 employees across the company’s diverse, family-owned operations in both Canada and the United States, JDI contributes to eight business sectors:

- Forestry and Forest Products
- Shipbuilding and Industrial Manufacturing
- Transportation and Logistics
- Retail and Distribution
- Construction and Equipment
- Consumer Products
- Food
- Agriculture

The JDI Forest Supply Chain (Supply Chain)¹ is made up of businesses in the Forestry and Forest Products and Consumer Products sectors, encompassing all our activities in our lumber, pulp and tissue businesses. The Supply Chain includes the land, forests, wood supply, tree nurseries, silviculture (tree planting and tending), logging operations, sawmills, peat and gardening products, pulp, paper, corrugated medium, consumer tissue and diaper manufacturing facilities. We transport many of our

products by road, rail and sea through our affiliated transportation businesses. Investments in our environment and clean technology are also linked to our Industrial and Technological Benefit (ITB) commitments to Canada as part of the National Shipbuilding Strategy through Irving Shipbuilding.

Our operations in New Brunswick, Maine and Nova Scotia are rooted in an abundance of forest lands. As the second largest private timberland owner in North America, we own and manage 1.3 million hectares (3.2 million acres) of freehold (private) timberland and manage 1.1 million hectares (2.6 million acres) of government-owned Crown (public) land in New Brunswick (Crown Licence 7). We have a 25-year evergreen forest management and wood supply agreement with the Province of New Brunswick and receive additional wood supply from other Crown lands with long-term tenure associated with our manufacturing operations. We also purchase wood supply from large and small private landowners.



1] Includes operations wholly or partially in various Irving entities, including J.D. Irving, Limited; Irving Pulp & Paper, Limited; Irving Paper Limited; Irving Consumer Products Limited; Irving Consumer Products, Inc.; The New Brunswick Railway Company; Grand River Pellets Limited; Juniper Organics Limited; Rothesay Paper Holdings Ltd.; St. George Pulp & Paper Limited; St. George Power LP; Charlotte Pulp and Paper Co. Ltd.; Irving Forest Services Limited; Miramichi Timber Holdings Limited; Allagash Timberlands LP; Aroostook Timberlands LLC; Maine Woodlands Realty Company; Maritime Innovation Limited; Irving Forest Products, Inc. and Forest Patrol Ltd.

ABOUT THIS REPORT

This is the Forest Supply Chain’s fifth annual Climate, Conservation & Community Impact (CCC) Report, which details environmental, social and governance-related performance from Jan. 1, 2024 to Dec. 31, 2024 across JDI’s Forest Supply Chain operations in Canada and the United States.



In 2024, three major topics drove our discussions:

1. The value of working forests

- Working forests work for our customers by ensuring a **continuous supply of the quality products** they want and need.
- Working forests work for our employees and contractors by providing **well-paying, safe and secure employment**.
- Working forests work for our communities by securing jobs and capital investments that **generate tax revenue to support local community services**, events and people.
- Working forests work for conservation by **providing a variety of forest conditions** that support broad species biodiversity and recreation opportunities.

2. Climate resiliency and carbon neutrality

- Our **Forest Supply Chain has been verified carbon neutral since 2020** using international reporting standards.
- Our **tissue products have been verified carbon neutral** from cradle to grave since 2021.

- **Wildfire resiliency is embedded in the working forest** through investments in training, resources and management practices that reduce the amount of fuel to burn on the landscape.
- **Biomass energy investments** have been key to reducing greenhouse gas (GHG) emissions.
- Future investments in alternative energy such as Project NextGen and the Brighton Mountain Wind Farm will **increase energy security and reduce GHG emissions** from the local electric utility grid.

3. Openness and transparency

- This report is an opportunity to **communicate our performance directly** with our customers, local stakeholders and employees.
- Sharing information **promotes and enables outcome-based policy** related to forestry, energy, environment, immigration and taxation to maintain a competitive business environment.
- Sharing information **helps attract and retain talent** for our largely rural forest operations amid shifting demographics and changing workforce interests.

Consistent with past reports, our reporting content is guided by:



Global Reporting Initiative (GRI)



Sustainability Accounting Standards Board (SASB)
Pulp and Paper Product and Forestry Management standards



Task Force on Climate-Related Financial Disclosure (TCFD)



United Nations Sustainable Development Goals (SDGs)

We report on metrics from the following sustainable forest management systems:



Sustainable Forestry Initiative® (SFI®)



Forest Stewardship Council® (FSC® C041515)

All currency is in US dollars and all measurements are metric unless otherwise stated.

REPORT KEY

Throughout this report, we have endeavoured to clearly link each topic with an area of focus or action. This includes describing how significant the topic is to stakeholders (materiality), as well as how the topic relates to ESG standards, internal policies and commitments, external verification and long-term sustainability goals. Look for the following indicators:



The five topics identified as doubly material to stakeholders are marked with this badge in the top section of the analyst bar. Doubly material topics fall into three categories, identified by the following section colours:

ENVIRONMENT

SOCIAL

GOVERNANCE



Reporting Standard



This topic has been subjected to LIMITED ASSURANCE VERIFICATION by KPMG PRI. See statement on pp. 110-114.



This topic is subject to THIRD-PARTY CERTIFICATION under ISO®/SFI® and/ or FSC® standards. We adhere to these management systems and/ or standards and receive independent certification outside of the scope of this report.



This topic is governed by INTERNAL POLICY. Internal Policies are available by request.



We have also identified several United Nations Strategic Sustainable Development Goals (SDG) aligned with our sustainability objectives in the communities where we operate.

In the Appendix you will find index tables referencing where disclosures are addressed in the report as they relate to the GRI, SASB and TCFD standards to which our reporting has been guided by.



OUR PERFORMANCE

We are committed to continuous improvement and transparency. Our sustainability targets fall into two categories: annual and forward-looking.

ANNUAL TARGETS

MATERIAL TOPIC	TARGET	PROGRESS
Ethics, Values & Integrity	Publish an annual Climate, Conservation & Community Impact report for the Forest Supply Chain.	●
Sustainable Forest Management	Maintain a five-year average of forest growth at or above harvest.	●
Sustainable Forest Management	Maintain third-party certification on all managed lands.	●
Forest Conservation & Biodiversity	Maintain our conservation areas program.	●
Safety	Continuous improvement towards a Critical Incident Rate of zero.	●
Community Engagement	Maintain community donations program.	●
Climate Action & Adaptation	Maintain carbon neutrality in the Forest Supply Chain through 2026 per internationally recognized methodologies.*	●

*The original goal was set under PAS 2060:2014, which has been retired. The goal will now be achieved under ISO® 14068.

FORWARD LOOKING TARGETS

MATERIAL TOPIC	TARGET	PROGRESS
Sustainable Forest Management	Double the spruce fir wood supply on freehold land by 2050.	●
Air & Water Quality Management	50 per cent reduction in water consumption intensity at Irving Pulp & Paper by 2029.	●
Air & Water Quality Management	25 per cent water reduction from Irving Tissue operations by 2030.	●
Climate Action & Adaptation	Increase tree planting levels on freehold to 16 million trees by 2027.	●
Climate Action & Adaptation	Maintain carbon neutrality in the Forest Supply Chain through 2026 per ISO® 14068.	●
Consumer Packaging	Reduce virgin plastic intensity by 25 per cent at Irving Tissue by 2030.	●
Waste Reduction & Management	Reach a 90 per cent diversion rate of non-hazardous waste from landfills by 2030.	●

● Achieved | On Track ⚠ Monitoring ○ Data Collection in Progress | Off Schedule

2024 WORKING FOREST *Highlights*



18,517,590

seedlings planted
(Freehold and Crown Licence 7)

100% of lands SFI® or FSC® certified

59%
of energy from
renewable
sources

560,000+
visitors to our nature parks

25% of productive
forest lands managed for the
primary purpose of conservation

91 newcomer employees
immigrated for Woodlands/Sawmills operations

\$40 million in
working forest research
(since 1990)





\$316 M in capital improvements in 2024



79 unique bird species
counted on New Brunswick working forest lands around Fundy National Park

\$1.1 B
Project NextGen
announced

\$600 M
Irving Tissue
Macon expansion
announced

\$400 M
Brighton Mountain
Wind Farm
announced

\$123 M
Environmental
Treatment Facility
total spend

270 Sites
added to our
Conservation
Areas Program















2024 PRODUCTION

We take great pride in sustainably managing our Forest Supply Chain and exceeding the expectations of our customers in every facet of our business.

Our Supply Chain is designed to maximize the value from the naturally diverse forests where we operate. The figures below represent 2024 annual production from our Sawmills, Pulp and Paper, Tissue and Personal Care divisions.



TISSUE	DIAPERS	GROWING MEDIA	PELLETS	LUMBER	PULP	PAPER	CORRUGATED
380,105 Tonnes Produced	18,455 Tonnes Produced	13,642 Tonnes Produced	237,369 Tonnes Produced	1,180,612 MFBM Produced***	323,902 Tonnes Produced	374,655 Tonnes Produced	184,544 Tonnes Produced
PRODUCTS Bath & Facial Tissue/ Paper Towel	PRODUCTS Baby Diapers & Pants	PRODUCTS Peat Moss & Growing Media	PRODUCTS Industrial Wood Pellets For Fuel/Heat	PRODUCTS Structural & Appearance Grade Lumber	PRODUCTS Bleached Northern Softwood Kraft Pulp	PRODUCTS Printing Paper	PRODUCTS Corrugated Medium/ Linerboard
 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div>	 <div>PEFC www.pefc.org Promoting Sustainable Forest Management www.pefc-canada.org</div>	 <div>SUSTAINABLY GROWN CERTIFIED SCS GLOBAL SERVICES VERIFLORA® PROGRAM SCS-VER-00089</div>	 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div> 	 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div>  	 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div>	 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div>  <div>PEFC www.pefc.org Promoting Sustainable Forest Management www.pefc-canada.org</div>	 <div>SUSTAINABLE FORESTRY INITIATIVE SFI-00032</div>

* Masardis Sawmill acquired in January 2025
**Brighton Mountain Wind Farm announced in 2024
*** Thousands, Foot Board Measure



Sustainable Forest Management

PROJECT NEXT GEN

A Generational Investment in Canada's Forest Products Industry

Unlocking the full value of a working forest requires competitive markets for all forest products, including low grade products like pulpwood and wood chips. In 2024, we announced Project NextGen, a generational upgrade to our pulp mill in Saint John, N.B. that will ensure this market exists for years to come.

The \$1.1-billion (USD) project represents the largest investment in the Canadian forest products industry since 1993, made possible because of our investments to grow the wood supply. Once complete, NextGen will increase the mill's production by 66 per cent, placing it among the top producing kraft pulp mills in the world and as a global leader in environmental performance.

The pulp mill plays a vital role at the centre of our forest supply chain by creating high value softwood kraft pulp from lower value wood chips, bark and pulpwood. Project NextGen represents a commitment to see the mill continue this role

well into the future. From a forest management perspective, investments like NextGen also enable us to use every part of every tree that we can, enabling activities like thinning which keep the forest healthy. This is an important aspect of our approach to sustainable forest management.

NextGen also shows how the working forest works for alternative energy. The upgrade involves the construction of a new turbine and renewable energy generator that will increase the mill's renewable energy output. When complete, the mill will go from producing 30 megawatts of renewable energy to 120 megawatts, selling excess energy not required for mill processes to the New Brunswick electrical grid. Other environmental benefits include the construction of a new recovery boiler to replace the mill's 1970s-era boiler. The project will result in a reduction in the mill's carbon emissions and a reduction in water used to make kraft pulp. Project NextGen has received regulatory approval, with work set to begin in 2025.

"These upgrades will ensure the pulp mill continues to be at the heart of the forest products supply chain, and provides a regional market for chips, bark and pulpwood."



Mark Mosher, Executive Vice President,
Pulp and Paper



SUSTAINABLE FOREST MANAGEMENT

Defined by a continuous cycle of harvest and renewal, the working forest is sustainable. It balances the needs of customers today while enabling a growing wood supply for the future.

And it's rooted in tradition. Our commitment to sustainable forest management means growing more wood than we harvest, and when we do harvest, we use every part of every tree that we can, leaving little to waste.

100 per cent of harvested areas are reforested, either by tree planting or natural regeneration. In 2024, we planted 18.5 million trees, adding to the more than one billion total we've planted since 1957. The trees we plant are the result of more than 40 years of tree research, and while they grow into mature forests, we actively protect them from threats like wildfire and pests.

It all requires a long-term outlook, which is why we plan in 80-year cycles that are regularly updated to reflect new research and shifting public values. By managing forests sustainably, we know the working forest works: for our customers, our communities, conservation and biodiversity and our climate.



 MAINTAIN A 5-YEAR AVERAGE OF FOREST GROWTH AT OR ABOVE HARVEST.



REPORTING STANDARD

- ✓ SASB RR-FM-000.A
- ✓ SASB RR-FM-000.B
- ✓ SASB RR-FM-160A.1

Refer to reference tables on pp. 108-109

GOVERNANCE

-  Management Plans
-  Indigenous Relations Policy
-  Third Party Certifications: SFI®, FSC®

VERIFIED SUBJECT MATTER

-  Percentage of Forested Land Base Harvested
-  Total Lands Under Irving Management

See statement on pp. 110-114

STRATEGIC SDGS



REBECCA SHARP

Tree Planters Leave a Legacy that Lasts

Each summer, tree planters play a critical role in our strategy of growing more wood than we harvest. Rebecca Sharp has been part of this team for five years and now oversees the central New Brunswick tree planting program as the full-time project manager.

“From the very start, I realized how much I enjoyed working here – not just because of the work itself, but because of the people and the strong sense of team,” Rebecca said.

“Tree planting is the foundation of our company – we call ourselves the tree-growing company, and that’s exactly what we are.”

In the summer of 2024, more than 130 tree planters made up this team, many of whom were students. More than just a summer job to help pay for school, tree planting build skills in work ethic, problem solving, resilience and team work as well as confidence and leadership.

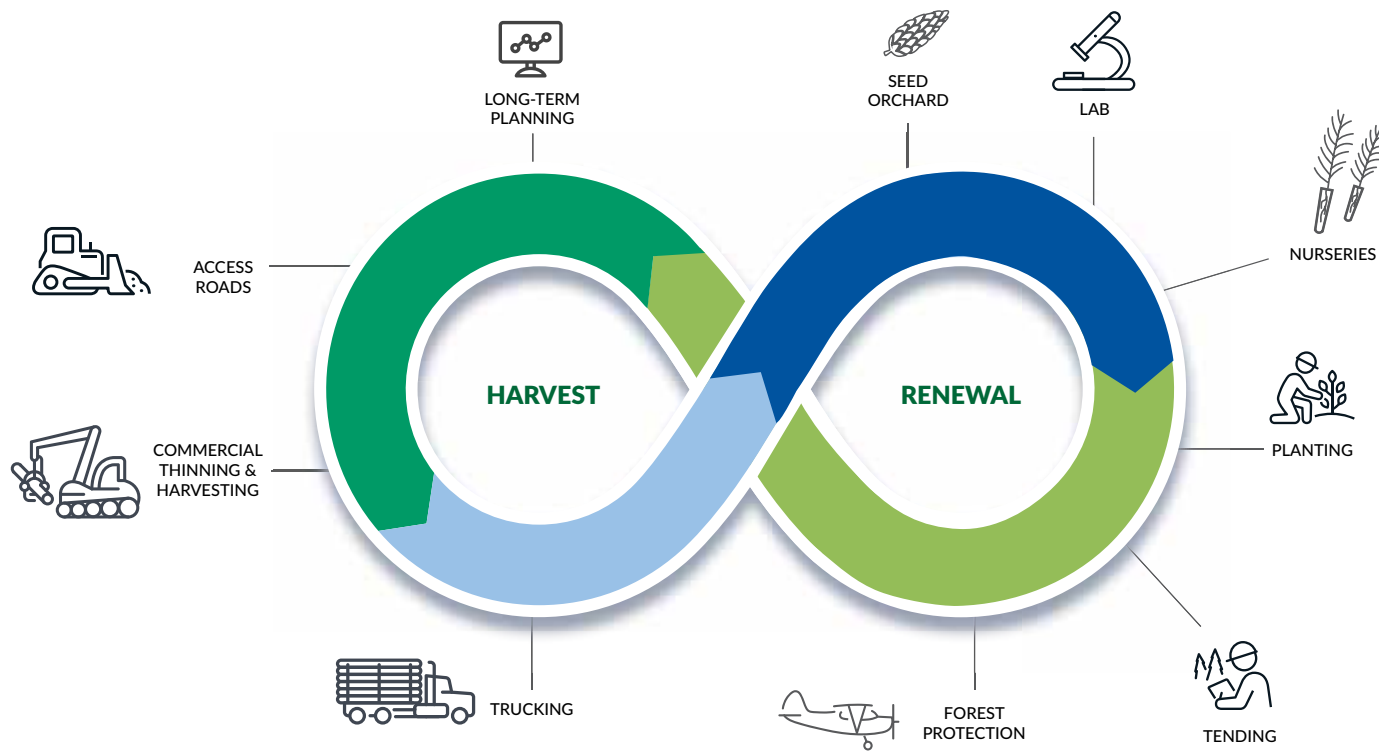
And the job is demanding, both physically and mentally. Tree planters must be up at the crack of dawn to beat the summer heat and insects. Navigating rough terrain and all sorts of weather conditions, tree planters put in 10 hours per day of physically demanding labour. They are in the constant repetitive motion of stepping, planting a seedling, securing it with soil and starting again at least 2,000 times per day – that’s one seedling planted every six seconds.

But it’s also rewarding. During the 2024 season, the crews planted a total of 18.5 million seedlings – each contributing to a 40-year legacy of growing the working forest for the next generation.

“Tree planting is a unique type of summer job – one that allows students and young people to leave a lasting legacy,” Rebecca said. “Every tree they plant contributes to the company in many ways for decades to come.”



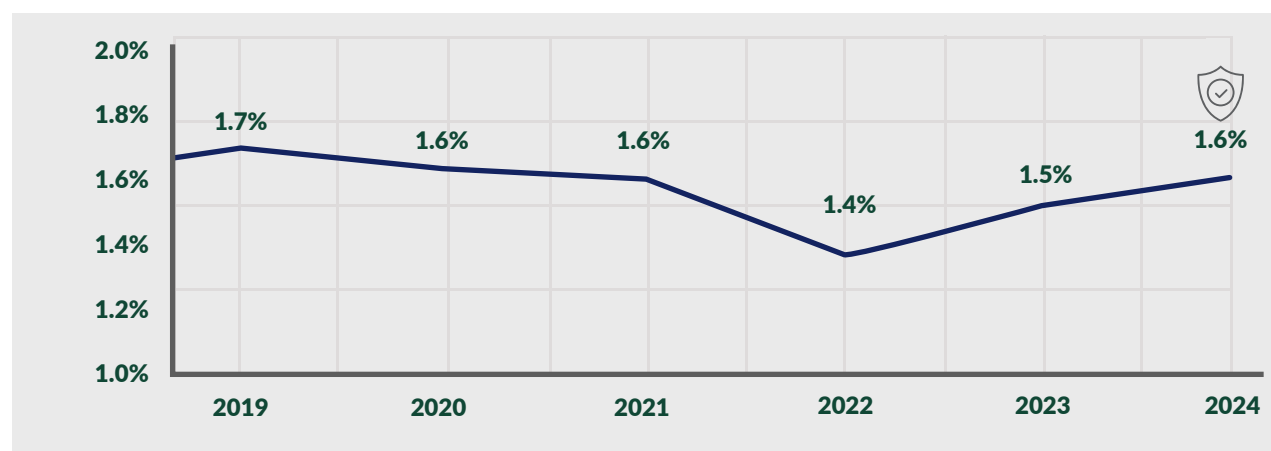
Rebecca Sharp,
Project Manager, Tree Planting



HARVEST

In 2024, we harvested just 1.6 per cent of the forests we manage. The working forest constantly cycles between harvest and renewal thanks to careful stewardship. This responsible forest management framework requires a deep understanding of the forest inventory and how it changes over time, so that we will never run out of trees. However, when it comes to the harvesting side of the cycle, there can be misconceptions.

PERCENTAGE OF FORESTED LAND BASE HARVESTED*



* Defined as the harvested area into the total lands under management.

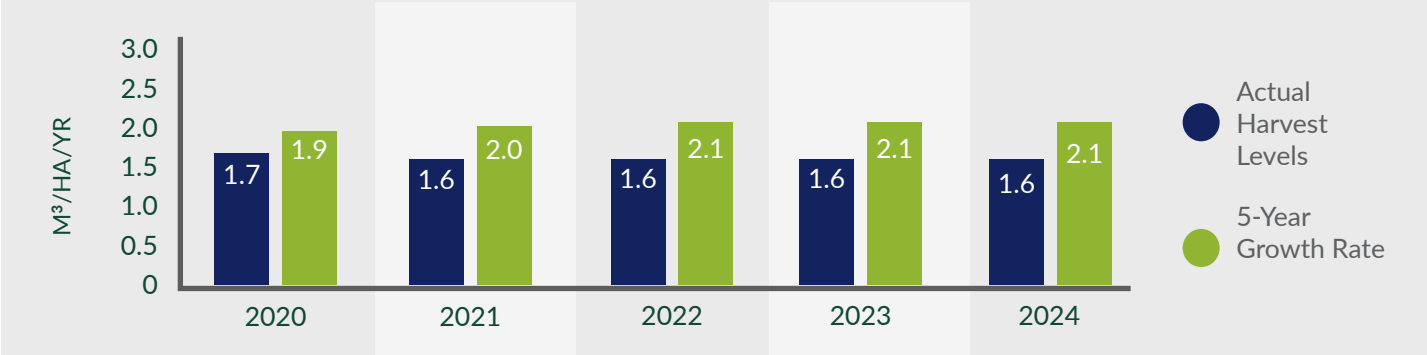
MYTH VS. PRACTICE

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> Only one type of harvesting method is considered. | → | <ul style="list-style-type: none"> Our foresters carefully choose from a variety of even-aged and uneven-aged harvesting techniques based on species, age, soil type, forest regeneration plan, plants and wildlife, water protection, recreation, aesthetics and natural disturbance patterns. |
| <ul style="list-style-type: none"> Clearcutting is never an appropriate harvesting method. | → | <ul style="list-style-type: none"> Clearcutting is an even-aged forest harvesting and regeneration method in which most or all trees within a specified area are harvested at the same time. While the term can be contentious, the practice is often appropriate in the right forest conditions to regenerate the next generation of forest. |
| <ul style="list-style-type: none"> Clearcutting results in deforestation, involves huge tracts of land where trees do not grow back for many years and is harmful to water and wildlife. | → | <ul style="list-style-type: none"> Deforestation results when forests are permanently cleared to be used for other purposes (like agriculture or subdivisions). In the working forest, the clearing is temporary as clearcuts quickly regrow back into new forest. The average size of a clearcut area in the forests we manage is about 15 hectares. This is a fraction of the 100-hectare maximum allowed. These areas are fully regenerated and contain abundant plants that support a wide variety of wildlife species. We also follow all required buffers to protect water. |
| <ul style="list-style-type: none"> Even-aged patches of the same tree species are unnatural. | → | <ul style="list-style-type: none"> While it is an oversimplification to say that the patches made by natural disturbances and clearcuts are the same, even-aged disturbance patterns do occur frequently in nature. Causes include fires, insect outbreaks and strong winds. Because of this, some tree species have adapted to naturally require the full-sunlight conditions of larger disturbance patterns to regenerate, while others need the shady conditions of growing under older trees that result from selection harvesting methods. |
| <ul style="list-style-type: none"> Only certain trees or parts of the tree can be used in the Forest Supply Chain. | → | <ul style="list-style-type: none"> We are optimized to maximize the value of each tree and tree species by using every part of every tree that we can. Our modern sawmill, pulp and paper and tissue manufacturing facilities are highly integrated, allowing us to match the mix of tree species and products. Other parts of the tree, like bark, sawdust, shavings and lignin can be used for energy. In the forest, the advanced machinery that harvests and processes trees are fed current market information that allows them to produce wood products to millimeter precision to match customer orders. In our sawmills, state-of-the-art scanning and imaging equipment is used to maximize the yield of each log. |
| <ul style="list-style-type: none"> Producing paper products is wasteful. | → | <ul style="list-style-type: none"> The byproducts from producing lumber, like wood chips, sawdust and bark, are referred to as residuals. Pulpwood, the portions of trees that are too small, crooked or rotten to make lumber, is made into woodchips. These byproducts are used to produce tissue, while other residuals like tree bark are burned in biomass boilers to produce renewable energy that powers our sawmills. |

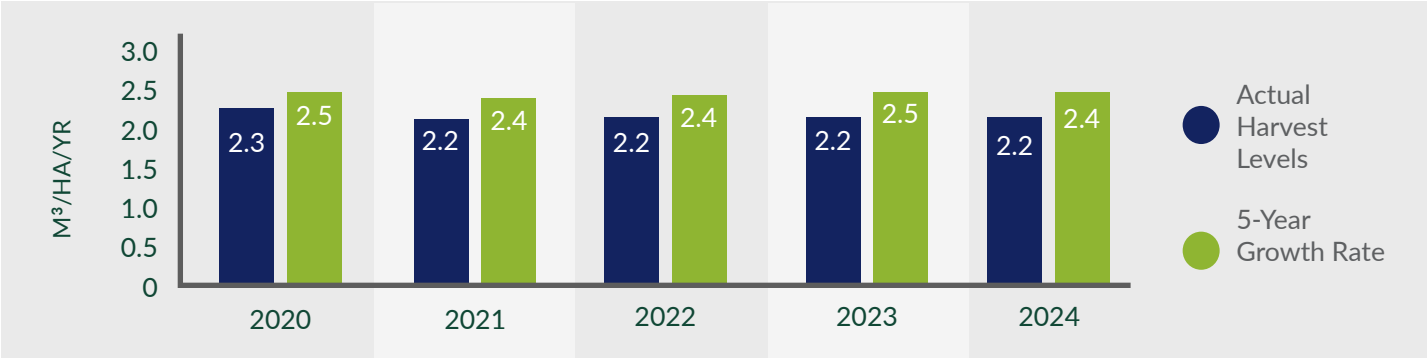


John Everett and Max Côté | Chipman, NB

FOREST GROWTH AND HARVEST RATES
CROWN LICENCE 7



FREEHOLD



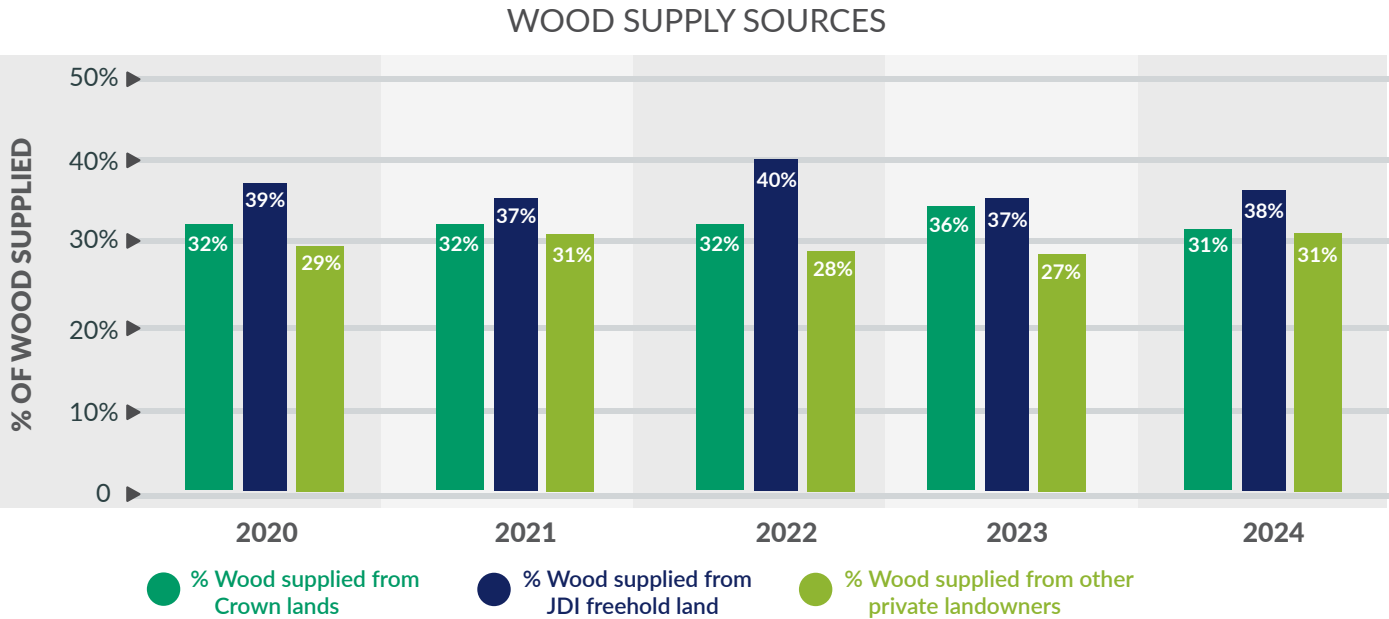
The new CT scanner installed at our Veneer Sawmill in 2024 allows us to visualize the inside of a log before we even make the first cut. The 3D scanner shows us what wood products we can obtain from each log depending on the log's rotation. This then allows us to select the optimal angle and saw pattern that will produce the most value out of a single log. Investing in optimization at our sawmills, like the Veneer CT scanner, is one way we make sure we are using every part of every tree that we can and leaving as little to waste as possible.

Long-term Planning

We build 80-year forest management plans that are reviewed every five years to stay up to date and adaptable. This planning requires an in-depth understanding of the state of the forest and where it is going.

To this end, we incorporate airborne laser scanning of the entire forest to produce an accurate forest inventory that can measure height down to the

individual tree. From here we use a network of ground plots and advanced machine learning to establish the initial inventory levels, then model growth rates, harvest schedules and reforestation activity. With this, our foresters use optimization software to set targets on increasing wood supply and balance other forest values like conservation, biodiversity, water quality and recreation.

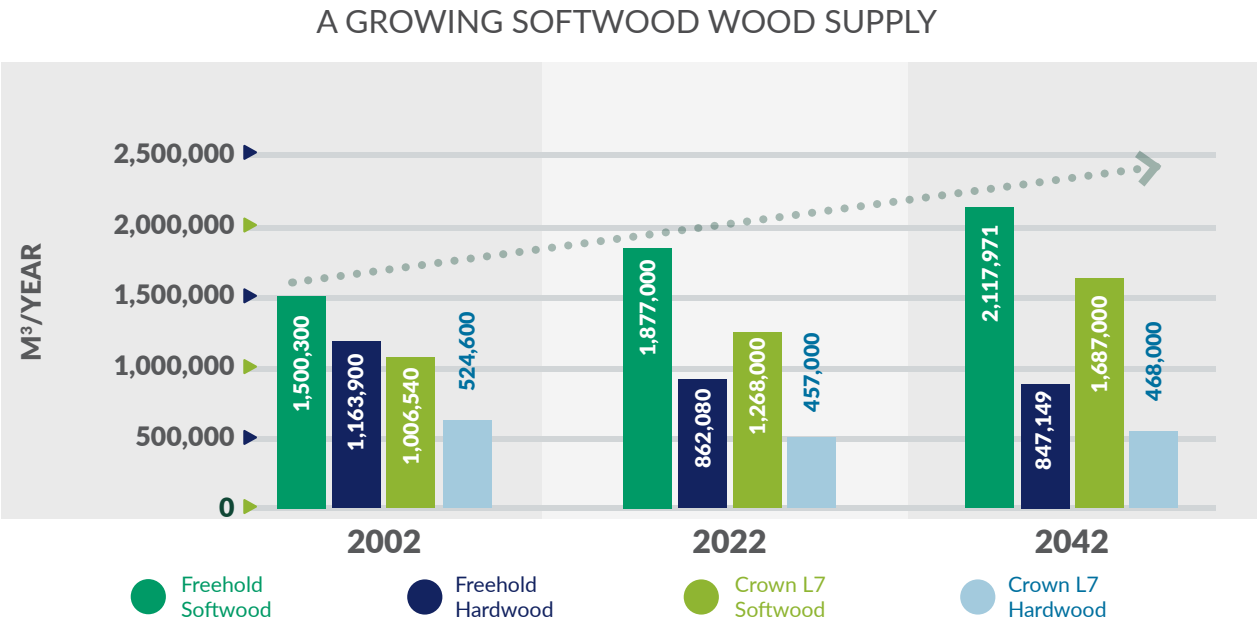


TOTAL LANDS UNDER IRVING MANAGEMENT

HECTARES	ACRES	
795,915	1,966,749	NB & NS Freehold
517,245	1,278,140	Maine Freehold
1,061,290	2,622,505	NB Crown Licence 7
2,374,450	5,867,394	Total

RENEWAL

As the demand for renewable forest products grows, so too does the demand on our managed lands. With a limited amount of working forest land available, sustainable intensification is key to ensure we are obtaining the highest yield on each hectare planted while planning for a changing climate.



Silviculture

Silviculture is the art and science of growing trees. It is also key to sustainable forest intensification. Our approach to silviculture ensures we are establishing a forest that is healthy, more productive and more resilient to climate change.

At the heart of this strategy is tree planting. **Since 1957, we have planted more than a billion trees, and in 2024 alone, we planted 18.5 million of them.** These planted stands then receive follow-up competition control and thinning intervention throughout their lifetimes, providing for the optimal conditions needed to grow. We plant six different species of spruce and pine trees, and diversity is further achieved by the presence of naturally regenerated species in planted stands throughout their lifecycles.

But first, we need to make sure we are identifying and growing trees best suited for future climate change adaptability in the Acadian Forest (see map on p. 102). That is where our tree improvement program comes in.

The program includes our Maritime Innovation Limited lab in Sussex, N.B., where world class

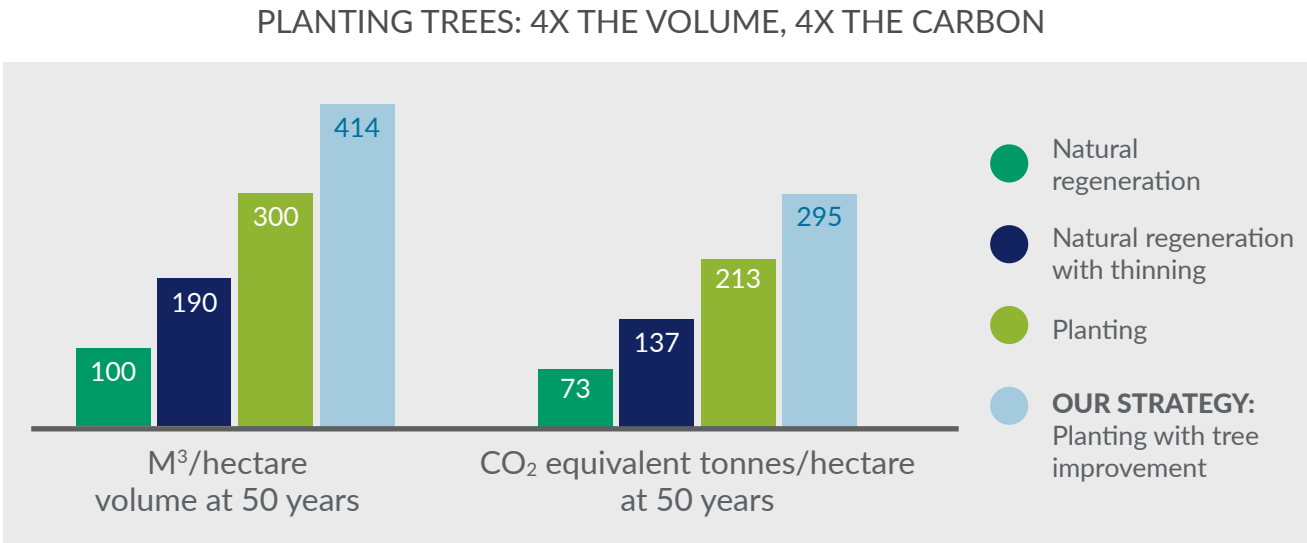
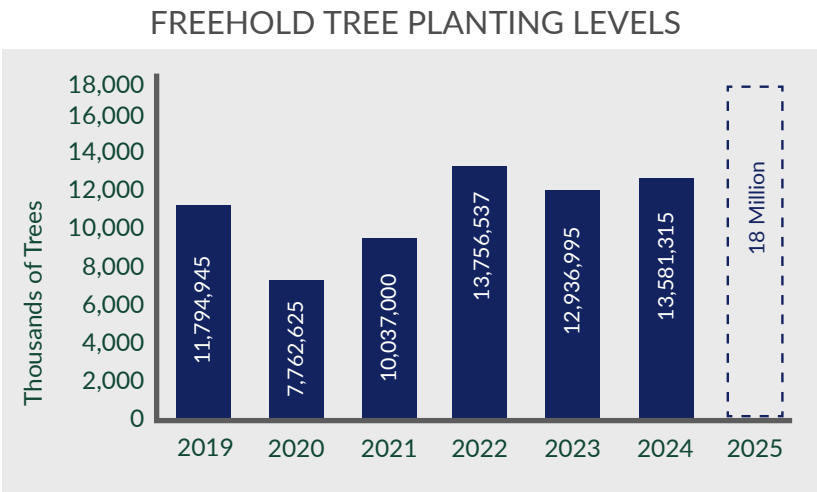
research identifies tree families with the best genetics. We produce field-tested seeds at our Parkindale Seed Orchard. These are then grown in our nursery facilities, where our expert growers from around the world grow millions of seedlings annually.

Over 45 years later, this program is yielding results, demonstrating significant advancements in growth rates, timber quality and pest resistance.

We have invested substantially in our nurseries to boost seedling output in order to increase our freehold tree planting. In 2024, our freehold tree planting increased to over 13.6 million seedlings – on pace to achieve our goal of 18 million seedlings in 2025.

The results of our silviculture and tree improvement program speak for themselves: **Four times more wood grows on each planted hectare compared to natural regeneration.** This means that wood product amount, economic activity and carbon dioxide sequestration also increase fourfold. And with more wood growing on a smaller footprint, more forest can be set aside for conservation and recreation.

INCREASE TREE PLANTING LEVELS ON FREEHOLD TO 16 MILLION TREES BY 2027.



DOUBLE THE WOOD SUPPLY ON FREEHOLD LAND BY 2050.

FOREST PROTECTION

The risk of pests and forest fires is expected to increase amid a changing climate. That is why we have worked to make sure our planted forests have built-in climate change resiliency.

Spruce Budworm

Eastern Spruce Budworm (*Choristoneura fumiferana*) is the most destructive threat to our region's forests. The insect feeds on fir and spruce trees, and outbreaks can devastate the wood supply.

We collaborate with the Healthy Forest Partnership on the spruce budworm Early Intervention Strategy (EIS). Established in 2014, this program involves monitoring, early detection and targeted small area treatments and has been successful in preventing the widespread outbreaks currently being experienced in neighbouring Quebec. In the program's first decade only 1.6 million acres of targeted treatment was required to stop the

spread of the pest compared to 1 to 3 million acres per year during past outbreaks.

The success of the Early Intervention Strategy in New Brunswick has led to knowledge sharing and the formation of the Maine Budworm Response Coalition, of which we are a part, to implement the program in the state. Monitoring of affected areas took place in 2024, and further study of insect larvae by the University of Maine determined there's risk of a wider outbreak. Early, targeted



Close up of a Spruce Budworm

treatment will take place in 2025 to prevent the outbreak from growing.

We also implement natural forms of defense against spruce budworm. Planting locally adapted spruce and pine trees tested through our tree improvement program reduces susceptibility to the pest compared to naturally regenerating balsam fir. Research conducted in collaboration with Carleton University has identified a specific endophyte (or fungus) that naturally produces anti-insect toxins. We have since treated more than 250 million planted seedlings to date with these endophytes.

Wildfire

Forest fires do occur in the working Acadian Forest where we operate, but with less frequency and severity than in boreal or western North American forests. There are several reasons for this:

1. The Acadian Forest, making up the forestland of New Brunswick, Nova Scotia and Maine, contains a mix of softwood trees and the more fire resilient hardwood trees which can act as fire breaks (see map on p. 102). The Acadian Forest also has more moisture on the landscape due to

increased rainfall and humidity that also reduces wildfire risk.

- 2. The nature of the working forest also builds resiliency to fires. Its continuous cycle of harvest and renewal results in less total fuel on the landscape. The practice of thinning adds space between trees and removes dead trees and “ladder fuels,” hampering a fire’s spread.
- 3. Our staff and contractors receive more than 1,000 hours of fire readiness training annually. We actively monitor weather and fuel systems daily and may suspend operations during days of higher ignition risk. Within minutes of a reported fire, a centrally dispatched “fire alarm” is sent directly to the mobile phones of our Woodlands staff.
- 4. Our Forest Patrol team is always ready to respond to a fire. We maintain our own aircraft, airstrips and wildland firefighting equipment. On the ground, the working forest’s network of well-maintained forest roads provides access for firefighters to quickly reach fires and start suppression activities.

FOREST PATROL
JDI’s World Class Aerial Firefighting Unit

During forest fire season in New Brunswick, the working forest is protected in part by Forest Patrol Ltd., our aerial firefighting unit.

From the end of April to the start of October, the pilots operate primarily out of Forest Patrol’s main air base in Juniper, N.B.

Among this team is Ian Osborne. As lead pilot, Ian is the first to dispatch in the event of a fire and is the team leader. This is his fifth season with Forest Patrol, and he’s been a pilot since 2004.

“It can be exciting,” Ian said of the work he’s built his career around.

Preparedness is a big part of the job. Even before the start of wildfire season at the end of April, the Forest Patrol team takes part in weeks’ worth of training. And once wildfire season is underway, they

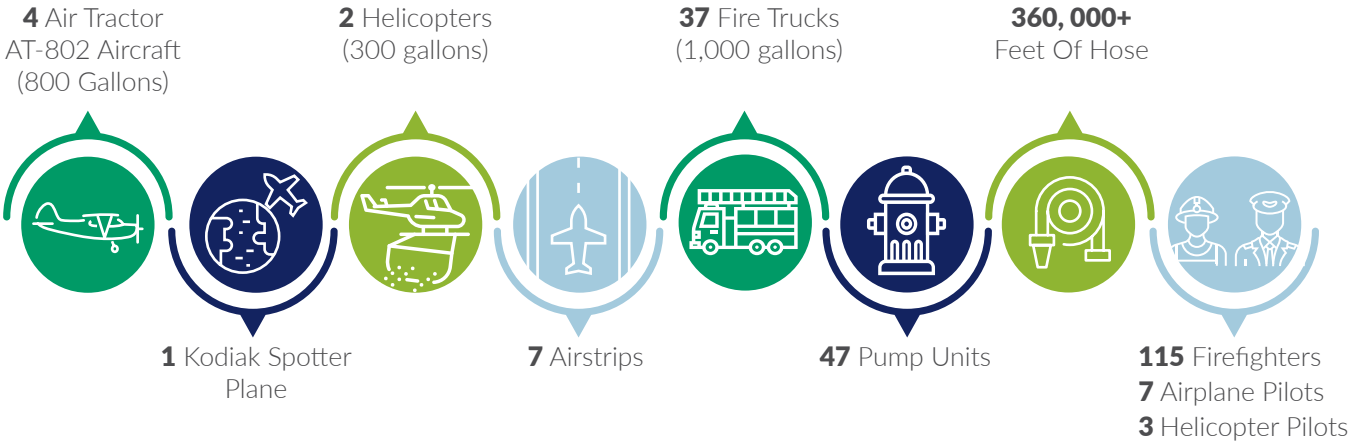
run weekly fire practices to maintain readiness. On days of high and extreme alert, the pilots are on standby. When a call comes in, the crew can be ready to launch in 15 minutes. Each of the aircraft are capable of flying 175 miles per hour, allowing them to be anywhere in New Brunswick in less than an hour.

“As we enter the working area, we do what we call a stack formation where we’re stacking 500 feet above each other, orbiting the fire,” Ian said.

The aircraft can carry more than 6,500 pounds of water, foam or long-term fire retardant. Depending on the nature of the fire, the Forest Patrol crew can adapt their response from a direct attack of dropping water or foam directly on a fire or the more common indirect approach of dropping long-term fire retardant around the fire’s perimeter to create a fire break.



Forest protection by the numbers:



FOREST CERTIFICATION

Since 2003, our commitment to accountability in sustainable forest management is supported by third-party certification on the lands we own and manage. We were early adopters of several internationally recognized forest management and chain of custody standards and have held ourselves accountable by undergoing third-party audits to verify our results.

Our Certifiers

- 100 per cent of our operations are annually and independently audited according to ISO® 14001 environmental standards and certified under the Sustainable Forestry Initiative® (SFI®) certification.
- 100 per cent of Maine woodlands are certified under the Forest Stewardship Council® (FSC®C041515) program.
- Third-party audits are performed by New Brunswick’s Department of Natural Resources and Energy Development, the Maine Forest Service, KPMG and SCS Global Services.

External audits are audits of systems. A functioning system is one that identifies and addresses problems. Zero non-conformances indicate a system working as designed.

No operation is perfect and forest management certification standards ensure that internal systems identify non-conformance and corrective actions are taken. These systems enable continuous improvement, which is monitored by the third-party audits.

As standards evolve, so do our operations. Since 2015, we have had zero external audit nonconformances in Woodlands. We prioritize meeting all regulatory requirements and going above and beyond certification standards.



MAINTAIN THIRD PARTY CERTIFICATIONS ON ALL MANAGED LANDS.

MORE THAN 20 YEARS OF THE THIRD-PARTY FOREST CERTIFICATION

100% of land certified

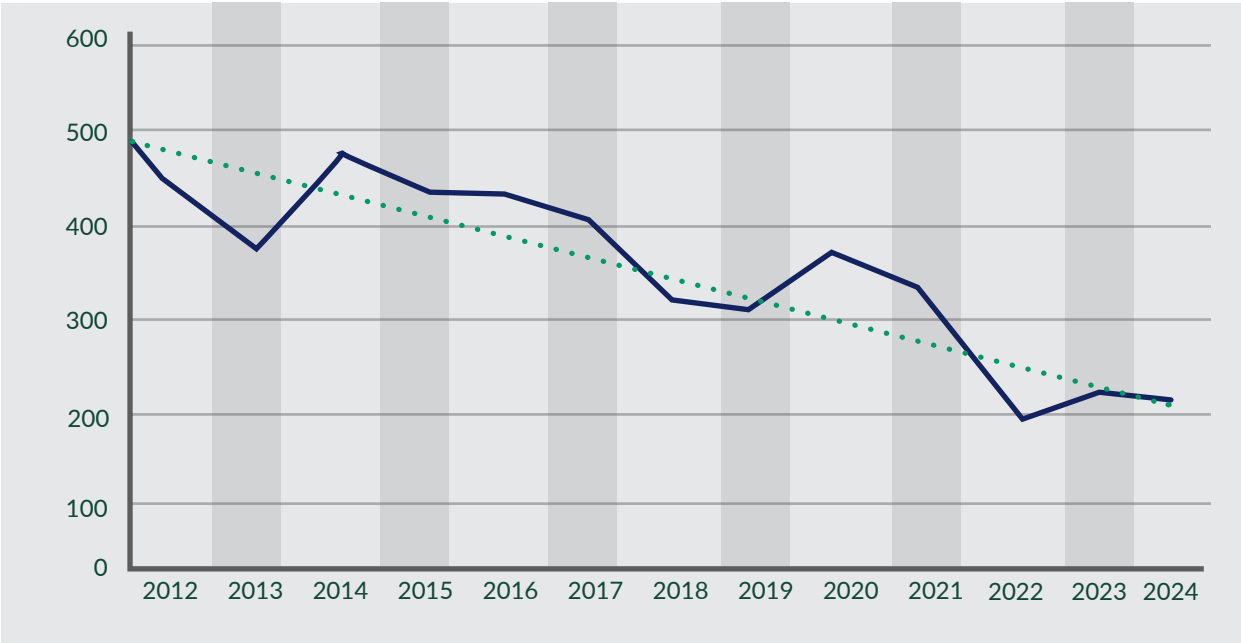


100% of land certified in Maine



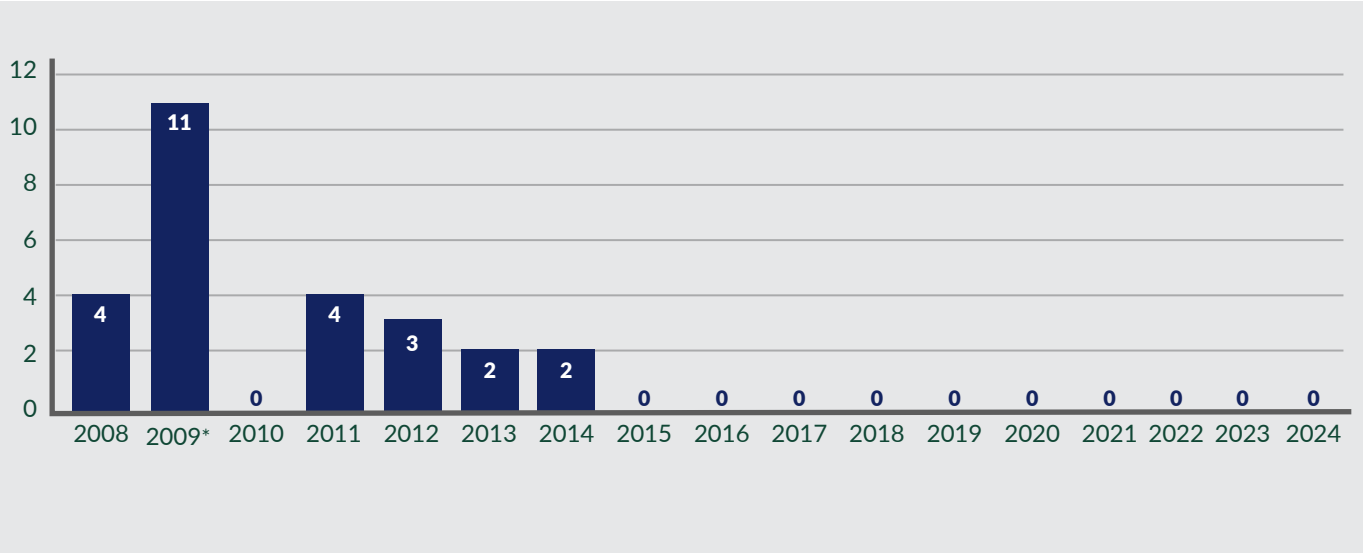
Environmental management systems certified for 100% of our land management activities

WOODLANDS INTERNAL AUDIT NON-CONFORMANCES



ZERO External Non-Conformances in 2024

EXTERNAL AUDIT NON-CONFORMANCES (SFI® & FSC®)



*2009 marked initial FSC® audit



Forest Conservation & Biodiversity

BIRD POPULATIONS ON THE RISE in Maine Working Forests

Bird populations are climbing in Maine – and it’s thanks to the working forest. A study conducted on industrial woodland in Maine found that bird populations have increased in the last 30 years.

Published in March 2024, “The 30-Year Bird Study: The role of Maine’s commercial forests for regional and national bird conservation, 1992-2022,” found that 70 per cent of species analyzed experienced increases in abundance, bucking continental trends.

Lead researcher John Hagan from the University of Maine replicated the location and methodology of research undertaken 30 years ago that investigated how commercial forests in Maine impact bird conservation.

In the updated study, a total of 47 species were analyzed, with data collected using sound monitoring of birdsong in varied forest conditions. Contrary to trends of bird population decline across North America, 33 of these species saw increased abundance compared to the 1990s.

The study noted that “the commercial forests of Maine are contributing in a positive way to bird conservation at a large scale.”¹

We manage the working forest so that there is a mix of forest communities across the landscape, resulting in a range of forest conditions like tree species, ages and structures. These in turn support a wide range of species diversity across the working forest landscape.

1) Hagan, J., S. Levy, K. Anderson, P. McKinley, M. Reed, J. Gunn, and B. Shamgochian. 2024. The Thirty-year Bird Study: The role of Maine’s commercial forest for regional and national bird conservation, 1992-2022. Our Climate Common Report, Georgetown, Maine. 39 pp.

“The commercial forests of Maine are contributing in a positive way to bird conservation at a large scale.”¹



Purple Finch

FOREST CONSERVATION & BIODIVERSITY

The working forest's continuous cycle of harvest and renewal produces a range of diverse forest types that vary in tree age, species, structure, patch size and arrangement distributed across the landscape. These forest types are connected with streams, lakes and wetlands as well as protected zones, parks and other conservation areas protected by regulation.

It would be impossible to achieve a direct accounting of biodiversity, so we approach biodiversity indirectly. When we maintain a broad variety of complementary conditions across the working and conservation forests, the outcome is a diversity of habitats that indirectly support diverse plants and animals.

Throughout the working forest landscape, all areas don't have to serve all living things so long as all area types are represented.

We manage for biodiversity by ensuring there is a mix of habitats and tree ages represented at the landscape scale. We achieve this through a three-pronged approach:



Working Forest: We manage the working forest for a diversity of tree species, plants and wildlife while maintaining water and habitats. This maintains younger and middle age classes.



Conservation Forest: We commit approximately 25 per cent of productive forest lands for the primary purpose of conservation across the lands we manage. This maintains older age classes and large trees.

2,400+

Conservation Areas Program: We continue our Conservation Areas Program that currently recognizes and conserves more than 2,400 unique areas. This maintains the rare/special consideration areas.



REPORTING STANDARD

- ✓ SASB RR-FM160A.2
- ✓ GRI 304-4
- ✓ GRI 304-3

Refer to reference tables on pp. 105-109

GOVERNANCE

- Site Specific Conservation Policies
- Landscape Level Conservation Policies
- Species Specific Guidelines

VERIFIED SUBJECT MATTER

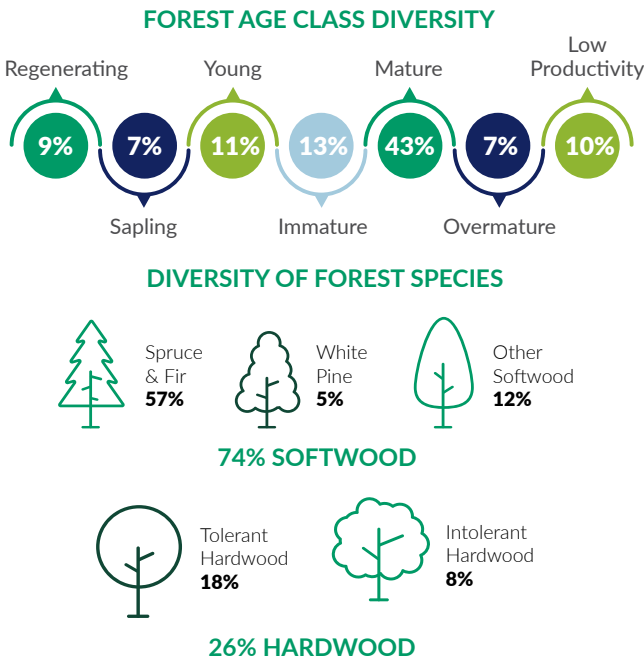
- Percentage of Conservation Forest
- Conservation Forest Area

See statement on pp. 110-114

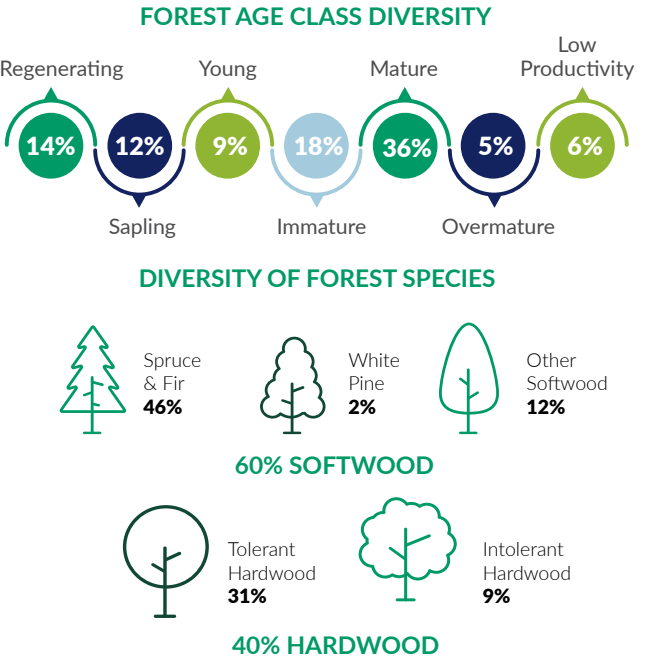
STRATEGIC SDGS



CROWN LICENCE 7 (NB)



JDI FREEHOLD (NB, NS, ME)



It is estimated there are 7.17 billion trees on JDI managed land in New Brunswick.



Miramichi River | Central New Brunswick

We monitor for biodiversity and the impacts of forest management through our research program. Since 1990, we have invested \$40 million in peer-reviewed research that informs our forest-wide conservation strategy, leading us to collaborate with dozens of researchers and over 100 graduate students. We are also a founding partner of many wildlife and forestry research projects and initiatives like the Forest Research Advisory Committee, which brings forest managers and researchers together to identify, advocate for and conduct research that addresses knowledge gaps.

INVESTING IN RESEARCH

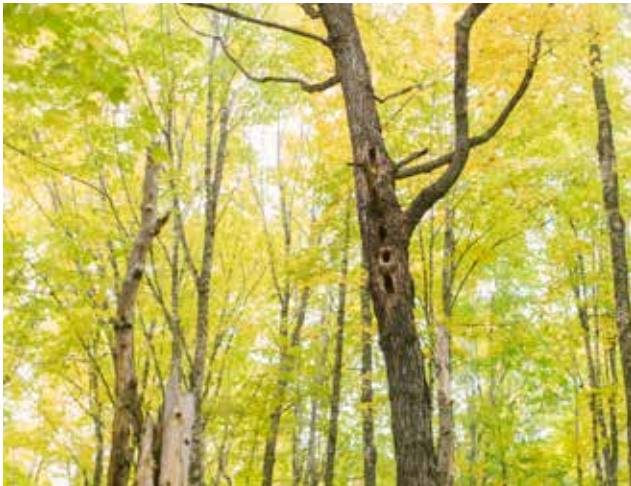
Our commitment to funding research helps us understand landscape-level impacts of forest management. We apply research outcomes to adapt our forest management strategy and operational plans to ensure we are taking all steps to avoid, minimize or mitigate impacts.

Our research demonstrates a clear role for both forest management and conservation efforts in maintaining biodiversity on our managed lands while providing for the ample habitat needs



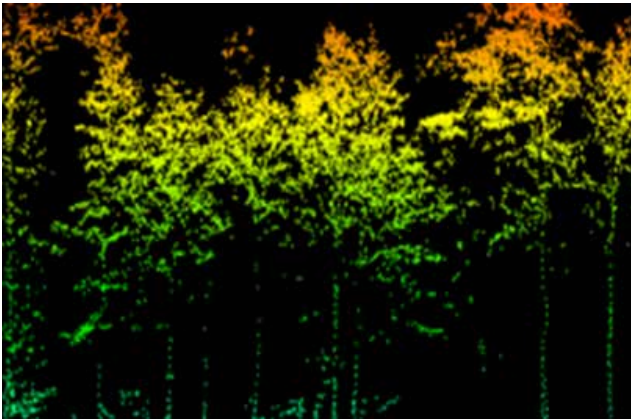
of various species. This informs our adaptive management approach.

Together, these studies show that we have a mixture of forest communities across the landscape. Species that require older and larger trees are well served in some areas while species that seek out younger and smaller trees can find these features in other areas. This mixture of forest conditions supports a wide variety of plant and wildlife species.



Tree species diversity

We participated in a recent peer reviewed study analyzing tree species diversity in planted and naturally regenerated stands that found no difference in diversity. The study found that our forests contain an abundant mixture of community types and tree species and we now have a means to measure it. ²



Large diameter trees

We also worked with researchers to develop a method of locating and counting large diameter trees using the airborne laser scanning technology LiDAR (light detection and ranging) in order to build an inventory of large trees across the landscape.³ Large diameter trees are acknowledged to have important conservation value for various species.



Late-successional and old growth-like forest

Through our membership with the Cooperative Forestry Research Unit, we contributed to another study that used LiDAR to identify patches of older forest classes across private and public forestland in northern Maine. This included land we own and manage. Known as Late-successional and old growth-like forests (LSOG), these older forest classes range in age from 150 to 400 years and contain features that certain species need. They also store more carbon than younger forest classes. There is growing interest in conserving more of these LSOG areas, but we first have to locate them within the forest landscape. The study found that LiDAR can identify LSOG stands to a high degree of accuracy, providing data that can be used to determine areas for potential conservation efforts in the future.⁴

2] Timothy L. White, Greg W. Adams, Anthony R. Taylor, Rolland Gagnon, Josh R. Sherrill, Andrew W. McCartney, Tree species diversity in managed Acadian forests of Eastern Canada, Canadian Journal of Forest Research, Volume 54, Issue 11, 2024, Pages 1339-1355
3] Pitt, Douglas; Venier, Lisa; Adams, Greg; McCartney, Andrew. LiDAR-derived forest inventory data to map and quantify ecologically important large trees across large spatial extents, Wiley Ecological Applications, In review.
4] Hagan, J., B. Shamgochian, M. Taylor, and M. Reed. 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp.

Research Highlights

Our partnerships with researchers in the last decade have improved our understanding of how wildlife like birds, deer and moose interact with the working forest. This in turn has helped shape our approach to forest management.



Songbirds and the working forest

Research into songbird species in the working forest found that higher levels of forest management had no negative impact on species abundance. Research has also shown that the working forest maintains sufficient habitat options for Canada Warbler and Olive-Sided Flycatcher, two species of conservation concern.



Bird species abundance in southern New Brunswick

Research on bird species in working forest land and in Fundy National Park in southern New Brunswick found that both habitats were complementary, having both the younger working forest and the conserved older forest to enhance diversity. While there were 79 unique species on working forest land and 65 in the park, across the landscape 85 unique species were identified.



White-tailed deer habitat

This study, a cross-border collaboration of six research and government organizations, used GPS data to track White-tailed deer in order to better understand winter habitat selection. The results will inform our approach to conserving appropriate deer wintering areas.



Moose and winter tick interactions

Researchers equipped 286 moose calves with GPS collars to better understand the impacts of winter ticks, climate change and predation on moose populations. Findings suggest ticks impact calf survival and moose abundance.

CORY TROWBRIDGE

Leading Wood Turtle Research

Cory Trowbridge, a PhD student in the University of New Brunswick's Faculty of Forestry and Environmental Management, is studying the impact of the working forest on wood turtles, a federally endangered species. The study's findings will inform future forestry practices.

As a species that lives in forested environments around rivers, wood turtles can be susceptible to impacts from forest management practices. Learning about this turtle can both allow us to monitor how the working forest already supports diverse species and what it could do better.

In 2024, Cory and his team tagged 19 female wood turtles with GPS and radio transmitters in order to learn their movements and what habitats are used. Next, the turtles will be studied to analyze how harvested areas impact their habitat selection.

"You don't often in biology get chances to do such a study of a before/after, especially on this scale of wildlife biology and wildlife ecology," Cory said. "Usually you're coming into a population that's already been affected by something and you're trying to see how they reacted to it when you don't know what happened before. Luckily here we're able to know what happens before so we can see what they do after."

Wood turtles, unlike other turtle species in Canada, stay on land for the majority of the summer. They like semi-forested conditions so that they can warm up in the sunlight of open areas and cool down in canopy covered areas, conditions that the working forest can provide.



"This study is important because we need to protect the wildlife and the habitat we have. There's so much we rely on from wood products. But we can use practices that aren't as impactful and that might help promote ecology and biodiversity."

Cory Trowbridge, PhD Student, University of New Brunswick

Forest Degradation and Deforestation

Research shows that our forest management practices maintain diversity in the working forest and do not contribute to forest degradation or deforestation. Our operations are working to be in compliance with the EU Regulation on Deforestation-free products (EUDR) by **ensuring that all sources of wood fibre do not originate from forestland that was converted to agricultural use.**



No deforestation on owned or managed lands



No harvesting in primary or intact forests



No harvesting in old growth forests



No conversion of natural forest to plantations

MYTH VS. PRACTICE

- Forest management practices result in deforestation.
- Forest management practices result in forest degradation.
- Harvesting occurs in primary, intact and old growth forests.
- Tree planting results in plantation forests.
- Tree planting results in monocultures.

- The Food and Agriculture Organization of the United Nations (FAO) defines deforestation as “the conversion of forest to other land use independently of whether human-induced or not.”⁵ We ensure 100 per cent of harvested areas are reforested by tree planting or natural regeneration and these areas are maintained as forest land.
- Our approach to forest management at the landscape scale ensures we are positively contributing to forest diversity and minimizing risks associated with forest degradation.
- More than 400 years of European settlement has heavily influenced the Acadian Forest (see map on p.102). As a result, our operations are not found in areas of either intact, primary or old growth forests.
- While we do use tree planting to regenerate some harvested areas, these stands do not meet the definition of a “plantation forest.” The FAO defines a “plantation forest” as having “one or two species, even age class and regular spacing,”⁵ and which “specifically excludes forest established through planting or seeding which at stand maturity resembles or will resemble naturally regenerating forest.”⁵
- Research shows planted areas contain an abundance of naturally regenerated trees,⁶ while our follow-up treatment activities like manual clearing and commercial thinning create irregular spacing. Together these ensure planted areas resemble naturally regenerating conifer dominated forests at stand maturity.

5] United Nations Food and Agriculture Organization. 2020. Terms and Definitions. Global Forest Resources Assessment.
6] Timothy L. White, Greg W. Adams, Anthony R. Taylor, Rolland Gagnon, Josh R. Sherrill, Andrew W. McCartney, Tree species diversity in managed Acadian forests of Eastern Canada, Canadian Journal of Forest Research, Volume 54, Issue 11, 2024, Pages 1339-1355

CONSERVATION FOREST AREA

The target for conservation forest on Crown land is set by the Province of New Brunswick and aligned to public expectations. Currently, 30 per cent of Crown productive forest lands are set aside for conservation. On freehold we take a similar approach, setting aside 22 per cent. In total, **25 per cent of the productive forest lands under Irving management are managed for conservation.** Intensive silviculture on part of the forest means more wood can be grown on a smaller footprint, increasing the wood supply while enabling recent increases in conservation on Crown lands.

Total Conservation Area on Lands Under Irving Management: 554,069 HAs / 1,369,134 ACs

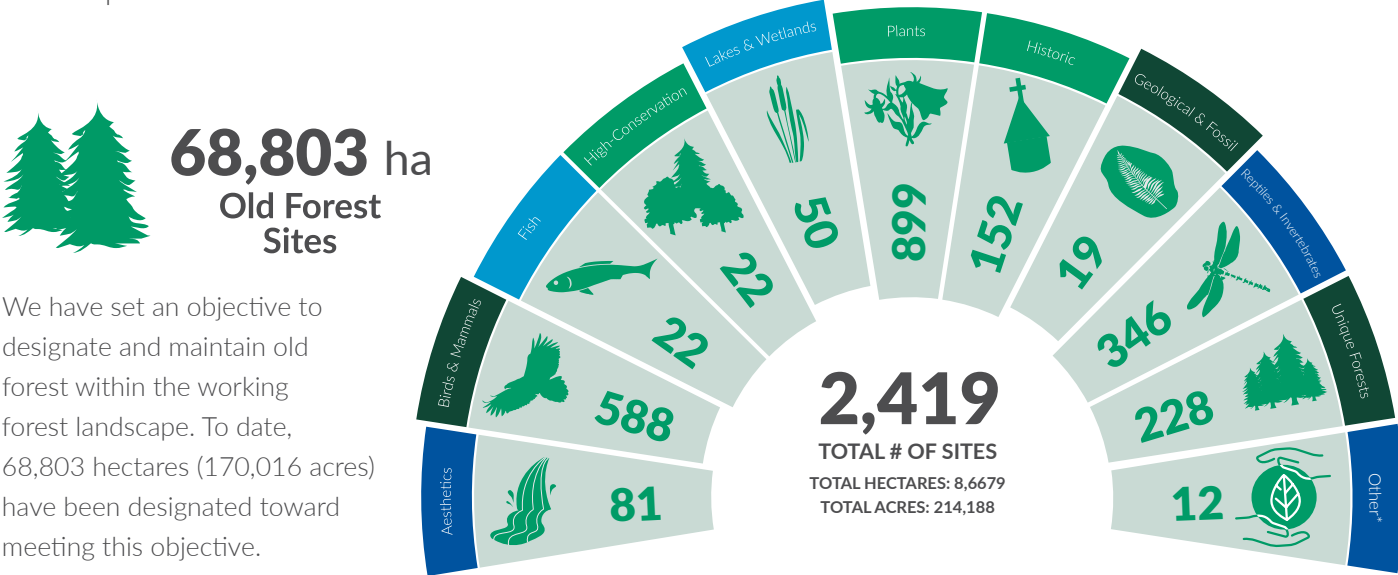
CONSERVED LANDS	FREEHOLD	CROWN LICENCE 7 (NB)
<ul style="list-style-type: none">• Unique Areas• Water and Wetland Buffers• Deer Wintering Areas• Old Forest Habitats• Protected Natural Areas	22% 269,969 HAs 667,108 ACs	30% 284,100 HAs 701,727 ACs

CONSERVATION AREAS PROGRAM

Some species are less common on the landscape and require special attention. Our Conservation Areas Program and nature parks feature some of the most rare and unique areas on our managed lands (see p. 86 for more on our parks). The program currently includes 2,419 identified, recorded and conserved site-specific habitats per our internal Forest Species of Concern Guidelines. These sites

and our parks play a critical role in wildlife habitat and ecosystem protection.

We added 270 new conservation sites in 2024. Our Woodlands staff and contractors receive training and are provided with incentives and rewards for identifying and conserving important biodiversity features.



*Other effective area-based conservation sites

Conservation and Biodiversity Management Strategy

Maintaining diversity is part of our approach to forest management. We implement our conservation and biodiversity strategy down to the smallest unique site through several policies and guidelines.

PILLAR	STRATEGY	TIMEFRAME	APPROACH
Working Forest	<ul style="list-style-type: none">• Maintain a diversity of forest communities of different tree species, ages, structure and patch sizes.• Conserve all water and wetlands and site-specific habitats for rare plants and wildlife.• Maintain connectivity between the working forest, conservation forest and protected areas.	Dynamic 80-year planning period with daily execution and annual monitoring following forest certification.	<ul style="list-style-type: none">• Long-term management planning with precision inventory• Annual training on regulations and site-specific habitat identification• Policy for Maintaining Ecological Retention Areas• Internal Forest Species of Concern Guidelines• Norway Spruce Reforestation Policy• Indirectly maintaining features like islands, big trees and snags, horizontal dead wood and coarse and fine woody debris• Variety of harvesting and reforestation methods to maintain a range of canopy cover and ground vegetation
Conservation Forest	<ul style="list-style-type: none">• Maintain a diversity of forest communities of different tree species, ages, structure and patch sizes.• Commit a significant portion of the forest to primary value of conservation (e.g. riparian buffers, deer wintering areas and old forest).	Dynamic 80-year planning period. Conservation areas may move over time to maintain their conservation value at the landscape scale.	<ul style="list-style-type: none">• Maintaining at least 10 per cent of forest as late successional• Linking our conservation lands with provincial Protected Natural Areas to ensure connectivity for plants and wildlife• Policy for Maintaining Late-Successional Forests*• Harvesting that improves conservation outcomes• Uncommon or Sensitive Forest Community Conservation Policy• Deer Wintering Habitat Management*
Conservation Areas Program	<ul style="list-style-type: none">• Maintain a range of the most unique locations on the landscape (from hundreds of hectares to a few square metres).• Maintain special habitats and ensure high-quality public recreation experiences in our parks.	Most often permanent.	<ul style="list-style-type: none">• Continually adding unique sites when identified• Providing free public access to dedicated nature parks• Vernal Pool Policy• Policy on the Protection of Heron and Raptor Nests• Legacy Tree Policy• Policy for the Detection of Rare or Endangered Plant Habitats• Monitoring Procedures for Pileated Woodpeckers and Heron Species

* On JDI freehold land



Fall Brook Falls | New Brunswick



Long Lake Smelt Streams | Maine



Christie Brook Falls | Nova Scotia



BEST IN CLASS

Effluent Treatment Exceeding Standards

Our Irving Pulp & Paper mill in Saint John, N.B. reached an impressive milestone in environmental performance with the construction completed on its Environmental Treatment Facility. The facility is now treating mill effluent.

It marked the culmination of a three-year, \$123-million (USD) project that will now see the mill exceed current and known future regulatory water quality requirements. The result is a custom solution with modernized, world class technology that places the Saint John mill among world leaders in environmental performance for water consumption and effluent treatment.

Treating 18.2 million gallons of water per day – enough to fill 27.5 Olympic-sized swimming pools – the treatment facility will have a major impact on the mill’s water use and water quality.

Wastewater from the pulping process in the mill is collected and pumped to the Environmental Treatment Facility from pumping stations throughout the site. At the facility, the wastewater passes through a series of tanks and processes to treat the water before it heads back towards the mill to be returned to the river.

First breaking ground in 2022, over the course of 350,000 contractor hours of construction workers erected more than 1,100 tonnes of structural steel and 950 tonnes of rebar while pouring 10,000 cubic metres of concrete. The project also consisted of installing more than 31,500 feet of piping and 170,000 feet of electrical cable.

The facility will be fully operational by the end of 2025 and will result in a 75 to 80 per cent reduction in regulated emissions associated with water treatment, Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS).

“The new Effluent Treatment Facility is important as it ensures the site will be environmentally sustainable for many years to come.”



Kyle Graves, Project Manager

Air & Water Quality Management

AIR & WATER QUALITY MANAGEMENT

We are committed to continuously reducing the impact of our air and water emissions on ecosystems, fish, wildlife and communities through our environmental policy that’s based on leading science and technology.

In fact, our operations meet and/or exceed a wide range of industry and site-specific regulations. These are applied at federal, state and provincial levels and come with requirements like annual reporting and limits on air and water emissions. There may also be site-specific approvals and permits to address additional requirements.

We continually re-evaluate our operations to assess and manage risks, ensuring ongoing compliance. Environmental management systems guide our divisions to enhance performance and outcomes.

DIVISION	ENVIRONMENTAL MANAGEMENT SYSTEM
Woodlands	ISO®14001 Environmental Management System with SFI® and FSC® certifications
Sawmills	Internally developed environmental management system
Pulp and Paper Irving Pulp & Paper Irving Paper Ltd. Lake Utopia Paper	ISO®14001 Environmental Management System with third party auditing against the standard
Irving Consumer Products	Internally developed environmental management system with guidance from U.S. Environmental Protection Agency

REPORTING STANDARD

- ✓ GRI 305-7
- ✓ GRI 303-1
- ✓ GRI 303-2
- ✓ GRI 303-3
- ✓ GRI 303-4
- ✓ GRI 303-5
- ✓ SASB RR-PP120A.1
- ✓ SASB RR-PP-140A.1

Refer to reference tables on pp. 105-109

GOVERNANCE

- Best Practices for Establishing & Harvesting Buffers
- Watercourse & Wetland Alteration Certification (New Brunswick Department of Environment and Local Government)
- Soft Ground BMP
- JDI Environmental Policy

STRATEGIC SDGS



Air Quality Management

We monitor, test and record the following air quality markers: Total Particulate Matter (TPM) emissions, Sulphur Oxides (SO_x), Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs).

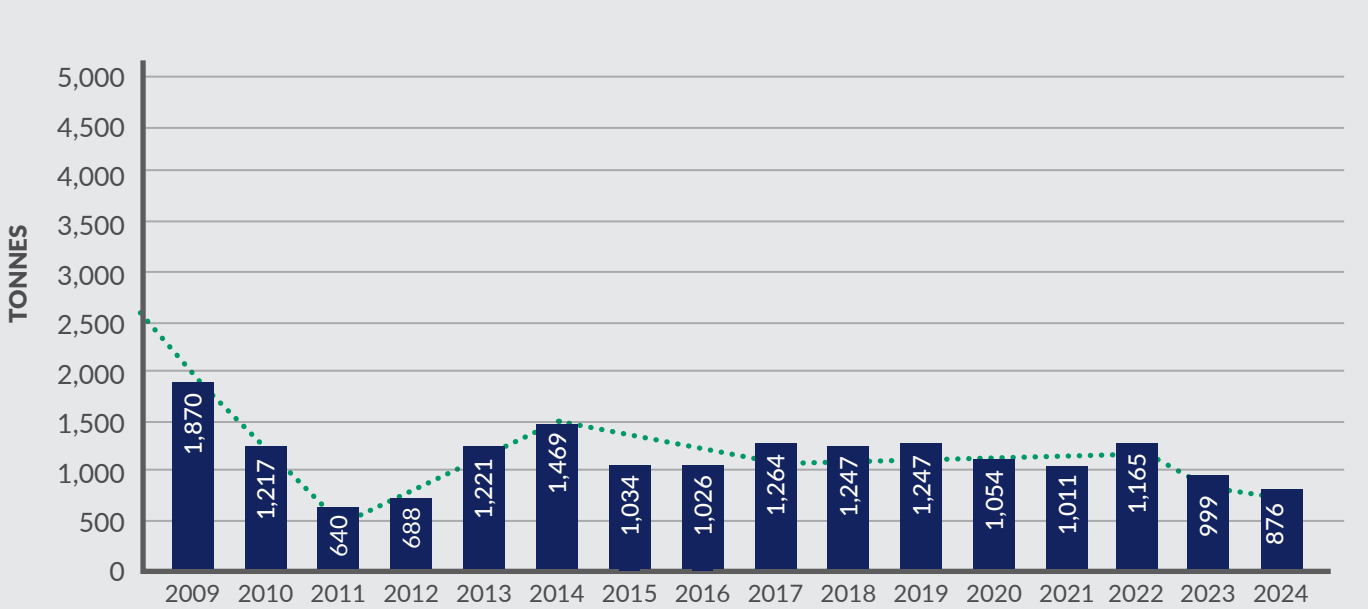
Our Pulp and Paper division is our most significant source of emissions. Its chemical pulping sites are most vulnerable to odour complaints, primarily caused by sulphur dioxide (SO₂) emissions. Capital investments at Irving Pulp & Paper have now virtually eliminated the potential for off-site odour detection during normal operation.

Our Forest Supply Chain operations are in full compliance with Canadian multi-sector pollutant regulations for NO_x emission rates.



Our commitment to minimizing odour means we investigate all odour complaints or inquiries, and we log and share all odour complaints with regulators, regardless of whether substantiated or not.

PULP & PAPER DIVISION AIR EMISSIONS – SO_x (TONNES)



Water Quality Management

Water use in the Pulp and Paper division and Irving Consumer Products operations exceeds 65 million m³ annually. This process water is sourced from local lakes and rivers, and strict environmental controls and regulations dictate how it is treated and released.

In our Sawmills and Woodlands divisions, we mitigate against runoff and siltation in rivers from our wood and lumber yards as well as forest roads that cross rivers and streams.

Our operations are not located in regions of high-water stress. Nevertheless, to prepare for a changing climate, reducing water consumption is vital to long-term sustainability, and we are making investments in this area.

Pulp and Paper – Water Quality

Proposed modernizations of the Canadian Pulp and Paper Effluent Regulations (PPER) have led to stricter water quality discharge limits in Canada. Irving Pulp & Paper is our largest facility with the highest water use, and we’ve made a significant investment to improve effluent quality with our Environmental Treatment Facility, now in operation.

Environmental monitoring in the Pulp and Paper division requires participants to identify causes and solutions for affected environments, such as evaluating the potential impact of wastewater on local fish and fish habitat. In 2024, we had four non-conformances on our aquatic environment related program.

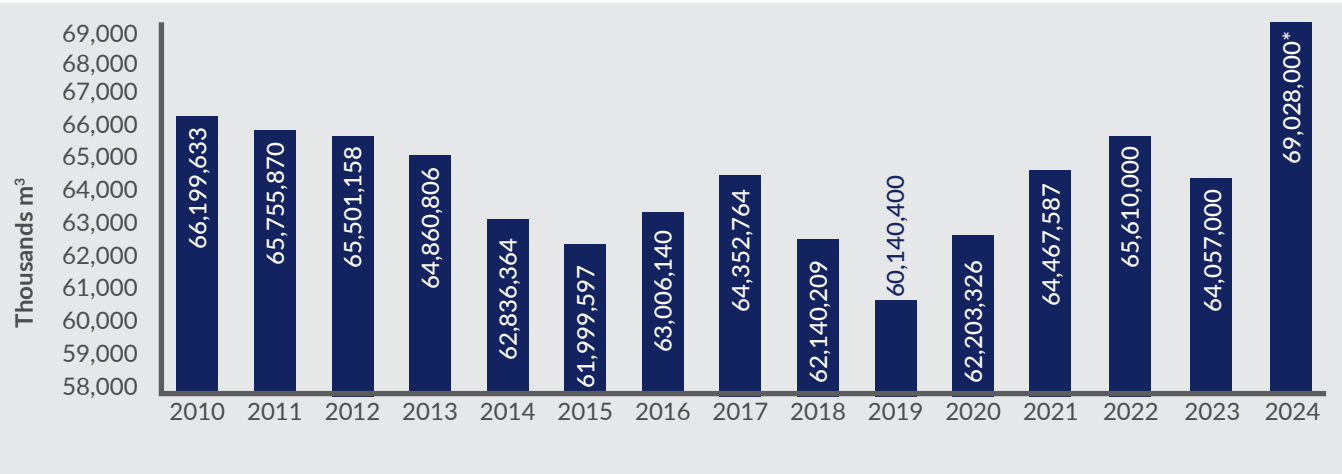


50% REDUCTION IN WATER CONSUMPTION AT IRVING PULP & PAPER BY 2028



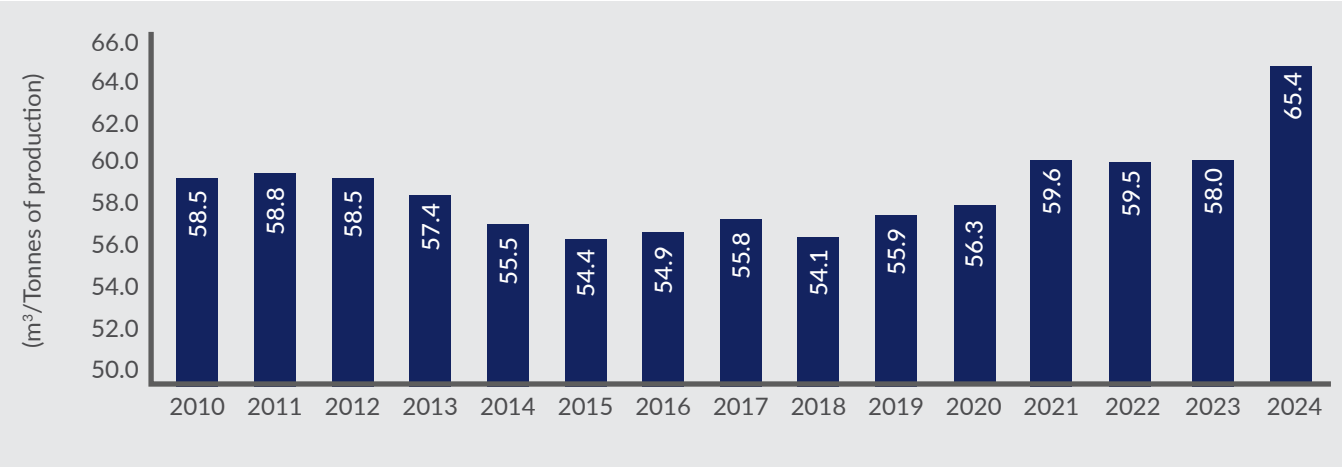
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Irving Tissue | Dieppe, NB

PULP & PAPER DIVISION AND TISSUE WATER USAGE (m³)

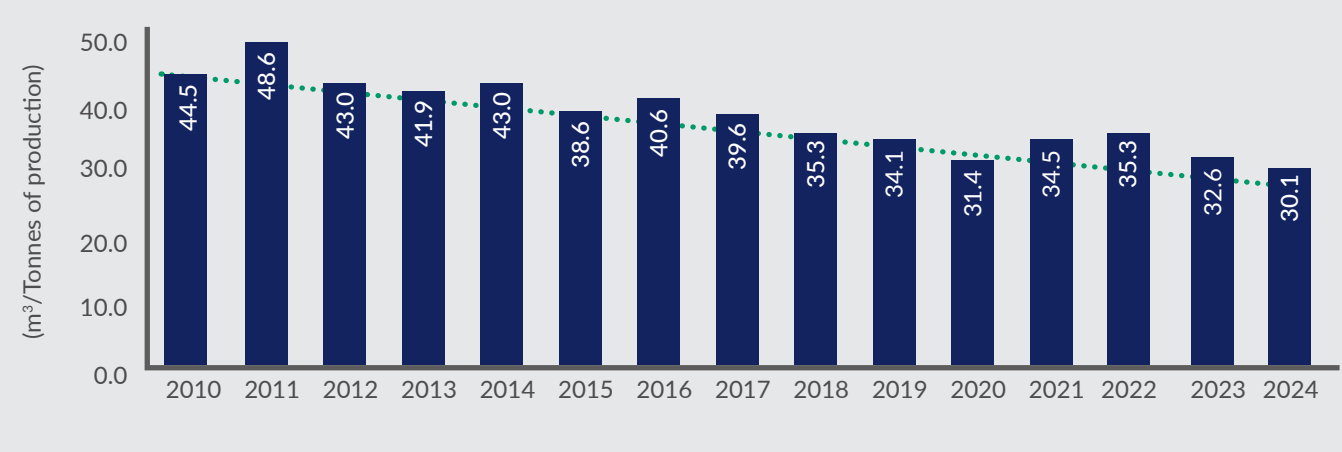


* Water use increased for testing and start up of the new Environmental Treatment Facility.

PULP & PAPER DIVISION – WATER USE EFFICIENCY (m³/Tonnes of production)



TISSUE – WATER USE EFFICIENCY (m³/Tonnes of production)



SURFACE WATER MANAGEMENT

Sawmills

The log and lumberyards surrounding our sawmill sites cover approximately 100 hectares (244 acres) of land and are home to various watercourses and wetlands. To protect these waters, we manage the levels of Total Suspended Solids through rigorous environmental standards. Before releasing water back into the environment, sediments are removed by settling, filtering or separating sediment in storm water.

Woodlands

Our Woodlands operations interact with water every day. Forests are a significant source of our freshwater, collecting rainfall and snowmelt which then moves along the surface and underground to small streams, leading to large rivers across the landscape. More water is stored in ponds, lakes and wetlands and under the surface as groundwater.

We follow best practices and all watercourse and wetland alteration regulations to enhance our water-related performance, which is reported through our forest certification.

Riparian buffers are forest areas next to bodies of water that are managed for conservation and water protection. These important tools are required by provincial and state regulations to mitigate the impacts of our operations by intercepting sediments before they enter the water. Across the landscape, riparian buffers account for more than 10 per cent of the lands we manage.



Joey Bent | Southern New Brunswick Woodlands



25% WATER REDUCTION FROM IRVING TISSUE OPERATIONS BY 2030

ZERO WATER QUALITY NON-CONFORMANCES AT ALL INDUSTRIAL SITES

100% OF ALL NEW WATER CROSSINGS COMPLIANT

MAGGIE GRAY

New Road Network Improves Environmental Performance

Since starting her full-time career with Irving Woodlands, Road Manager Maggie Gray has taken a leadership role on some of our major projects in central New Brunswick.

One year in, she became the project manager for the Taxis River Bridge, a large project that involved the construction of a 130-foot modular bridge and almost six kilometres of connecting road. In 2024, Maggie followed it up with the similar Napadogan Bridge project.

Both bridge projects were undertaken with water protection in mind. During construction, exposed soil was stabilized with hay to mitigate against siltation, and a silt fence was erected around the excavation area. The bridges allow us to avoid impacting riverbanks, thus protecting the watercourses.

Maggie is currently managing the Connector Yard Project, which involves the construction

of a new log yard and a new set of scales. Log yards are built in such a way so as to ensure that water runoff from the yard is carefully controlled in order to protect waterways.

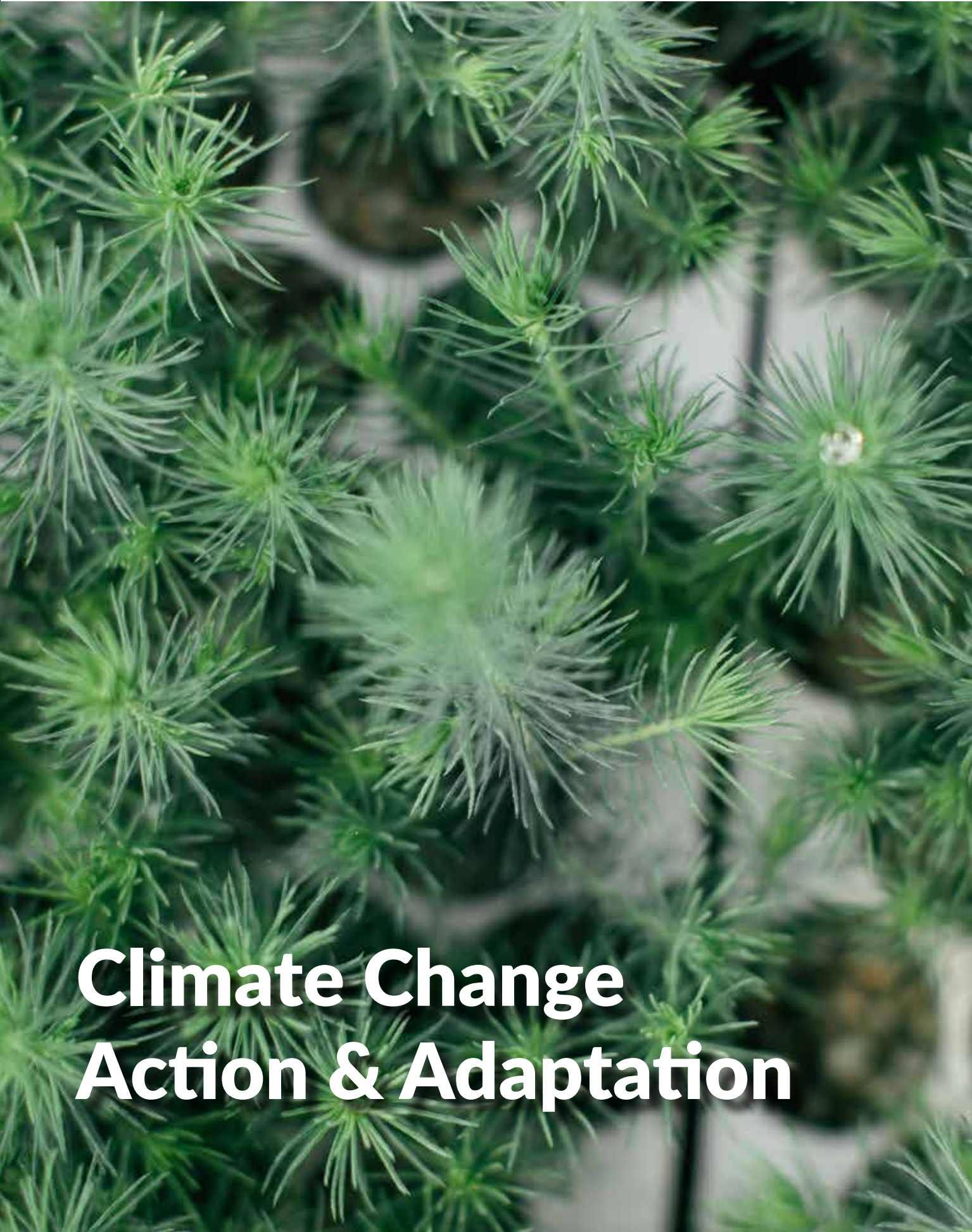
All three projects are part of our Strategic Road Network, a system of roads being built in central New Brunswick to connect main wood areas to the mills through offroad corridors, taking trucks off provincial highways.

Research shows that more intensively managed forests with higher road density have more impact on sedimentation in streams. Overall, building and maintenance associated with forest roads and water crossings have the largest impact on water quality. With more than 30,000 kilometres of forest roads on the lands we manage, we now use a woodlands road and watercourse crossing asset management database to help us understand asset conditions and prioritize high impact road and watercourse crossing maintenance projects.



“Seeing the projects become real is my favourite part. I get one under my belt, and immediately want to do another one. And JDI has been great for that because they keep putting stuff in front of me to mark another one off my list.”

Maggie Gray, Road Manager



Climate Change Action & Adaptation

BOLD STEP IN RENEWABLE ENERGY

Wind Farm Harnesses Working Forest

In 2024, we embarked on a new renewable energy project with the Brighton Mountain Wind project, a wind farm in western New Brunswick.

Located on 17,500 hectares of working forest land near Juniper, N.B., when fully completed, the 58-turbine, 350-megawatt wind farm will generate enough electricity to power 100,000 homes. It will also reduce fossil fuel reliance of the New Brunswick electrical grid by 30 per cent.

Construction on the project has already begun in 2025. Phase 1 – 34 turbines representing 200 megawatts – is set to be completed in 2027.

Phase 2, which will add another 150 megawatts, will commence at a later undetermined date.

The working forest works for our climate by removing and storing carbon from the atmosphere. Projects like Brighton Mountain Wind Farm are an example of how the working forest can add to this positive impact by also working to offer renewable electricity options to power our communities. Follow along with project updates at www.Brightonwind.com.



Brighton Mountain Wind Farm (rendering)

CLIMATE CHANGE ACTION & ADAPTATION

The trees we plant in the working forests of today will be harvested in a much different future climate. Decades of experience and monitoring show we are experiencing shorter winters, changes in precipitation, new forest pests and shifts in species composition. These changes could impact costs, future wood supply, operations and infrastructure. They require risk assessment and the development of adaptive strategies.

Where there are risks, there are also opportunities for the Forest Supply Chain to make a positive impact. **Both our Forest Supply Chain and Royale® tissue products have been verified carbon neutral under internationally recognized standards since 2020 and 2023, respectively.** While forest products manufacturing is energy intensive and can release significant greenhouse gas emissions from manufacturing and transportation, the Forest Supply Chain is carbon negative because it sequesters carbon in the growing forests and stores it in long-lived forest products after harvest. In fact, our carbon footprint is better than carbon neutral because we remove more carbon than we emit.



REPORTING STANDARD

- ✓ SASB RR-PP-110A.1
- ✓ SASB RR-PP-110A.2
- ✓ GRI 305-1
- ✓ GRI 305-2
- ✓ GRI 305-4
- ✓ TCFD - Metrics and Targets
- ✓ ISO® 14068:2023

Refer to reference tables on pp. 104-109

GOVERNANCE



ESG Steering Committee

VERIFIED SUBJECT MATTER



Net Forest Products Value Chain Emissions/ (Removals)

See statement on pp. 110-114

STRATEGIC SDGS



There is also an increasing demand for natural, forest-derived climate solutions like renewable forest products and bioenergy. **In 2024, 59 per cent of the direct energy used in our Forest Supply Chain was sourced from renewable biomass fuels.**

The inherent diversity of working forests ensures they can adapt to climate change. But we have a role to play too. Identifying, assessing and managing risks and opportunities is a continuous process guided by firsthand experience and engagement with external researchers so that the Forest Supply Chain remains competitive and resilient.

Physical Risks with Climate Change in the Forest Supply Chain

A change to forest composition or total wood supply poses the most significant climate change-driven risk to the Forest Supply Chain. This can be caused gradually with species shifts or suddenly due to wildfire, pests or windthrow.

An analysis on temperature change scenarios has given us insight into the potential impacts of gradual species shift on softwood supply. This study looked at various temperature scenarios, called representative concentration pathways (RCP),¹ and found that both the best and worst cases of temperature change “were not expected to result in significant impacts to timber supply over time.” (See table below.) In the most probable scenario, softwood timber supply decline can be mitigated by site-specific decisions around planted species, and even in the worst case, we should be able to mitigate impacts by planting drought-resistant seedlings, allowing us to maintain our northern softwood species.²

The research also showed that softwood declines are not expected until 2070 and are only projected to be 5 per cent between 2070 and 2095.² We will continue to study the effectiveness of tree improvement practices in a changing climate and adapt our species and family selection approaches in response.

SCENARIO	TEMPERATURE INCREASE	COMMENT
RCP 2.6	<2 °C	Unlikely – best case scenario
RCP 4.5	2 – 3 °C	Most probable scenario
RCP 8.5	4 – 5 °C	Unlikely – worst case scenario



MAINTAIN CARBON NEUTRALITY
IN THE FOREST SUPPLY CHAIN
THROUGH 2025 PER INTERNATIONALLY
RECOGNIZED METHODOLOGIES.

1] A Representative Concentration Pathway (RCP) is a greenhouse gas concentration trajectory developed by climate modellers to span a larger range of future global warming scenarios.
2] Van Lantz, McMongale, Henniger, Sharma, Withey, Ochuodho. December 2021. DRAFT MANUSCRIPT - Forest Succession, management and the economy under a changing climate: coupling economic and forest management models to assess impacts and adaption options.



Bridget MacNutt, Maritime Innovation Limited | Sussex, NB

Building Resiliency: Our Tree Improvement Program

We know from more than 45 years of tree improvement research that identifying the best tree families for tree growth also produces tree families that are more resilient to climate change, insects and disease.

It all starts at our **Parkindale Seed Orchard**, where we produce millions of well-adapted, genetically superior seeds for our **Juniper Tree Nursery** in Juniper, N.B. These seeds then become the seedlings our tree planters use to plant the future forest.

At our world-class **Maritime Innovation Limited** lab in Sussex, N.B., researchers identify the most robust tree varieties and propagate them through a process called somatic embryogenesis. This allows us to select for the best trees across a wide range of genetic diversity.

Our **Sussex Tree Nursery** in Sussex, N.B., works in tandem with Parkindale on a grafting program that produces exact copies of high value trees. It is also where we grow the seedlings destined for our test sites. Located across New Brunswick and Nova Scotia these sites test the performance of various tree families across multiple climatic zones. This allows us to understand which tree families are better adapted to different climatic conditions.

Matching the right tree species for the right site is key. For example, to build resiliency against a drier climate, we plant deeper-rooted species like Norway spruce, eastern white pine and Jack pine on sites that are drought prone.

Spruce and pine trees are projected to be more adaptable to warmer and/or dryer climates than naturally regenerating softwood species like Balsam fir, which is in a decades-long decline across the Acadian Forest and prone to multiple pests. By planting spruces and pines, we are adapting our forestry practices so that we will rely less on natural Balsam fir when regenerating conifers.

PARKINDALE SEED ORCHARD
Cutting Edge Tree Breeding Research

Our tree improvement program at the Parkindale Seed Orchard allows us to grow bigger trees faster, meaning we can obtain more wood out of the same amount of land, maximizing its value.

It’s something that orchard supervisor Courtney McDonald sees every day. After all, operations at Parkindale go year-round in order to produce superior quality seeds to grow the trees upon which the Forest Supply Chain is based.

“We can increase the health of the forest by ensuring we have healthy, strong trees to deploy on the land base,” Courtney said.

Depending on the time of year, Parkindale is bustling with a variety of activities, from tree breeding, pollen collection, tree grafting and orchard maintenance.

Cone collecting, the orchard’s largest program, begins in August. These cones are then processed and the seeds are shipped off to the Juniper Tree Nursery to grow the seedlings that will be planted the following year. The 2024 cone collecting season was a record breaking one with a total of 56,600 litres picked – enough to fill a standard swimming pool.

The trees produced through our grafting program are planted at Parkindale – white spruce, red spruce, black spruce, Norway spruce, white pine and Jack pine – and are studied as they grow.

Trees are tested for desired traits like growth, form, resilience to pests and diseases as well as adaptation to varying climates. The tree families that perform the strongest in these areas are then selected for breeding.



“This work is important because it not only puts us on a way to sustain our business going forward through increased yields to supply our mills, but it also maintains diversity in our species and allows us to opt for trees that are more resilient.”

Courtney McDonald, Orchard Supervisor

GHG Emissions and Energy Use


Understanding our greenhouse gas footprint is key to reducing it. To do our part, our Forest Supply Chain is committed to:

1. Increasing carbon removals in healthy working forests by increasing forest growth on JDI owned and managed land.

2. Increasing long-term CO₂ storage in lumber products by investing in our Supply Chain manufacturing facilities to boost the production of harvested wood products (HWP).
3. Increasing capital investments that will reduce greenhouse gas emissions in our manufacturing and supply chain operations.

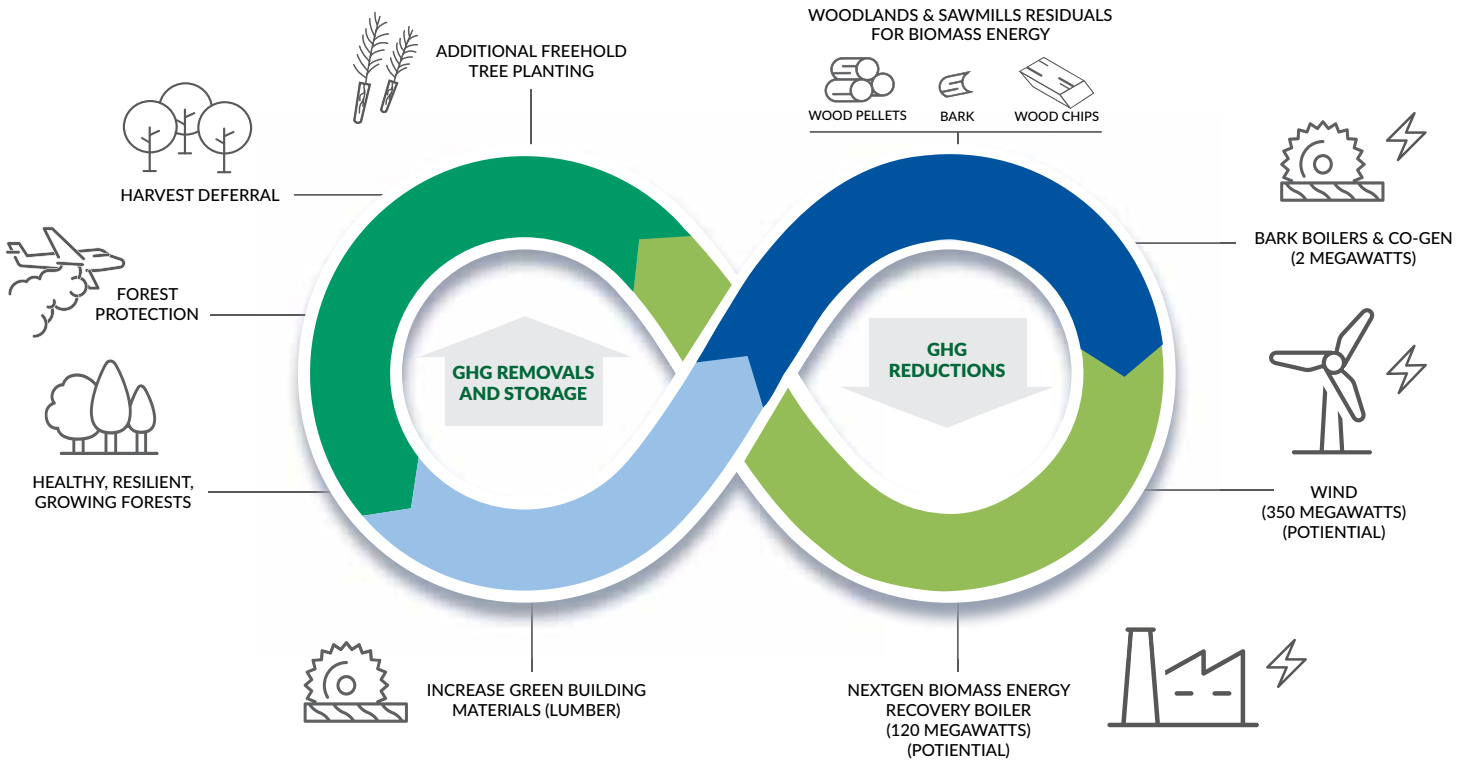
4. Reducing our GHG footprint in Supply Chain manufacturing operations through fuel efficiency or fuel switching, such as with biogenic fuels and electricity generation with waste steam.
- To learn more about the methodology, exclusions, data quality, uncertainty and detailed emissions breakdown, please see the Technical Supplement to the Carbon Footprint found at www.jdirvingsustainability.com.

2022 - 2024 GREENHOUSE GAS EMISSIONS AND REMOVALS

Type	Detail- Emission/(Removal)	2022 tonnes CO ₂ e	2023 tonnes CO ₂ e	2024 tonnes CO ₂ e*
Scope 1	Direct Fuels	553,000	516,000	495,000
Scope 2	Indirect Electricity	663,000	551,000	635,000
Scope 3	Upstream and Downstream Supply Chain	909,000	989,000	981,000
Sub-Total: Manufacturing and Supply Chain Emissions		2,125,000	2,056,000	2,111,000
Transfer	Net transfers (to) / from HWP	(976,000)	(1,048,000)	(1,102,000)
Removal	Net Forest Growth and Land Use – Freehold	(2,364,000)	(1,819,000)	(1,965,000)
Sub-Total: HWP Transfer plus Net Forest Growth (Removal)		(3,340,000)	(2,867,000)	(3,067,000)
Total: Net Forest Products Value Chain Emissions/(Removals)		(1,215,000)	(811,000)	 (956,000)

*The methodology for calculating removals changed in 2024 and therefore cannot be directly compared to 2023 and 2022. We are now using a five-year rolling average. See the Technical Supplement to the Carbon Footprint for further details.

The Working Forest - Climate Impact



Green Energy Projects

In 2024 we received regulatory approval for two renewable energy projects. Brighton Mountain Wind Farm is a 58-turbine, 350-megawatt project outside of Juniper, N.B. and Project NextGen involves a new recovery boiler at the Irving Pulp & Paper mill in Saint John, N.B., that will increase production and generate green energy.



Using Biomass to Power Our Sawmills

In 2024, 59 per cent of direct energy used in our forest supply chain was sourced from renewable biomass fuels. Since 2008, we've been replacing oil boilers in our sawmills with biomass boilers which convert biomass like wood waste and bark into steam that then powers the mills. This reduces costs and greenhouse gas emissions in our lumber drying process. Using biomass, like bark, as fuel is one way we realize our commitment to using every part of every tree that we can.

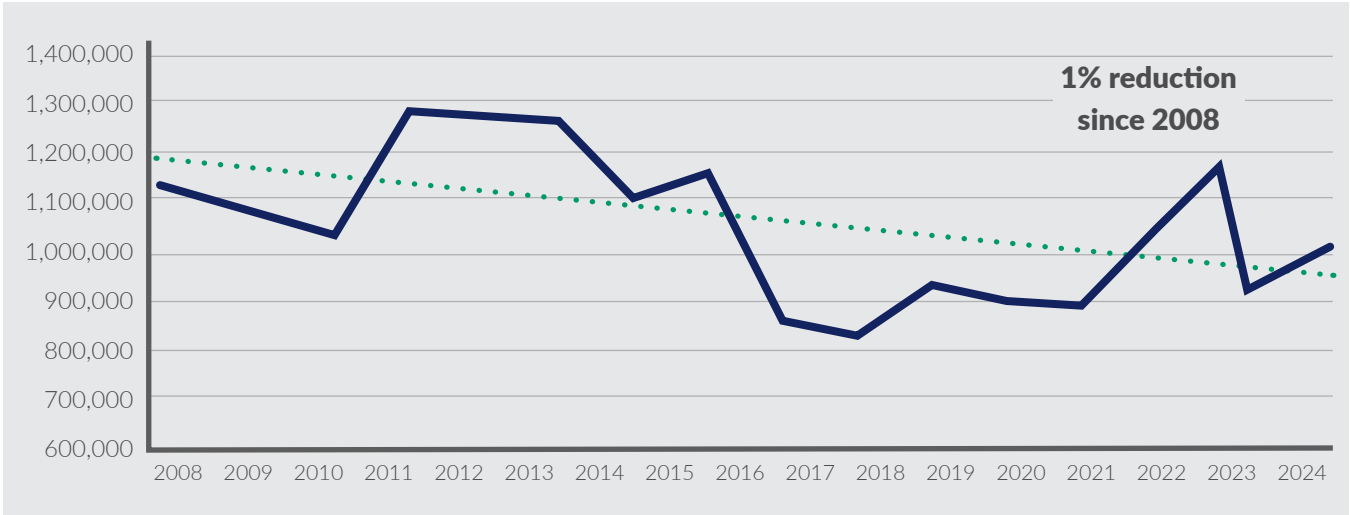


Tracking Our Carbon Footprint

SCOPE 1	SCOPE 2	SCOPE 3
Direct GHG emissions	Indirect GHG emissions associated with purchased energy	Indirect GHG emissions from activities in the Supply Chain (Category 1-8)

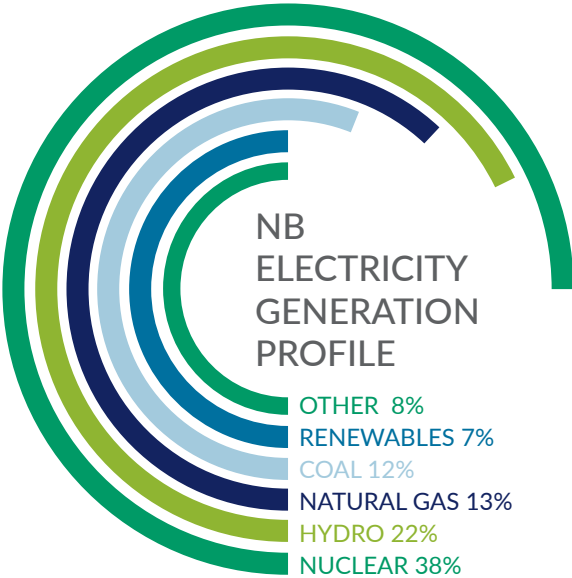
We started internal measurements for Scope 1 and Scope 2 emissions across the Supply Chain in 2008. Growth in our tissue business caused emissions to increase since 2020. However, Scope 1 and 2 emissions have still been reduced overall by one per cent since 2008. Future capital investments and energy efficiency improvements will begin to reduce emissions in future years.

FOREST SUPPLY CHAIN SCOPE 1 & 2
TOTAL GHG EMISSIONS (TONNES OF CO₂e)*



*Emissions prior to 2020 were not independently reviewed.

Irving Paper Limited, located in Saint John, N.B. is a heavy user of electricity, and its Scope 2 emissions are our single largest source of GHG emissions. Because of this, our total Scope 1 and 2 emissions are sensitive to annual fluctuations in the electricity mix of the New Brunswick energy grid, which is generated by nuclear, hydro, coal and other fossil fuel assets. Investments in renewable electricity will be key to stabilizing and reducing our GHG footprint.

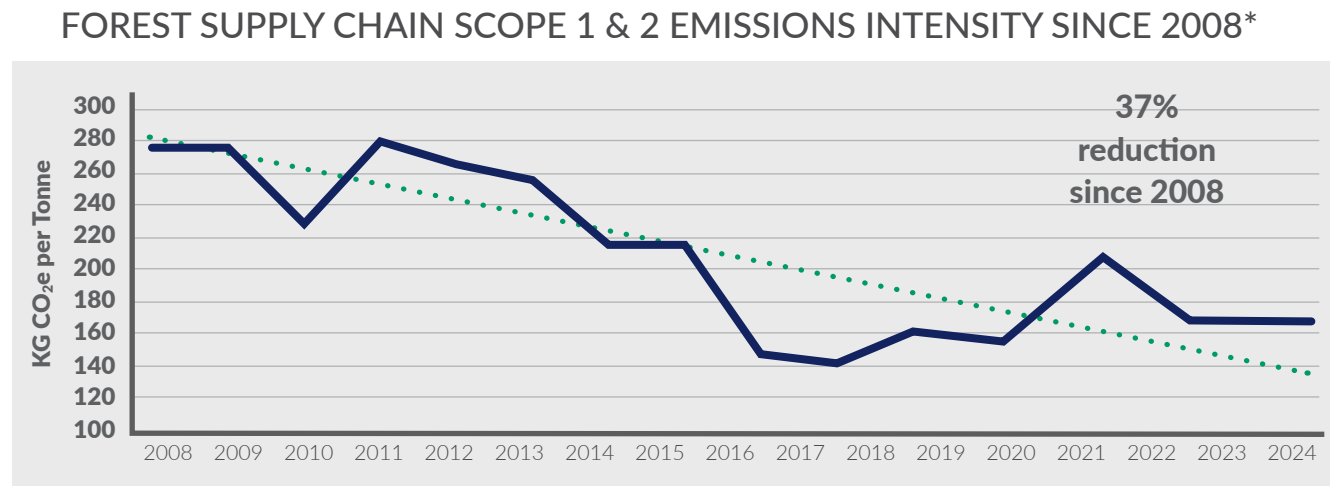


Greenhouse Gas Emission Intensity

We report our greenhouse gas emissions on an intensity basis, measuring the efficiency of how we use the energy we consume as our business grows.

Since 2008, the Forest Supply Chain has seen a 58 per cent increase in total production and a one

per cent decrease in total Scope 1 and 2 GHG emissions, resulting in a 37 per cent reduction in GHG emissions intensity over 16 years. This was achieved through initiatives directed at energy efficiency and productivity improvements in addition to fuel switching.



*Emissions prior to 2020 were not independently reviewed.

Reporting to International Standards

In previous years, we reported our organizational GHG emissions/(removals) to the PAS2060:2014 standard. This standard will be retired in 2025 and is being replaced by the ISO14068:2023 standard. Our GHG footprint reporting transitioned to this new standard in 2024.

We’ve been publishing our emissions and removals for the organizational boundary of the integrated Forest Supply Chain each year since 2020. This was first made public in 2022. The Supply Chain is committed to maintaining carbon neutrality within the boundary annually.

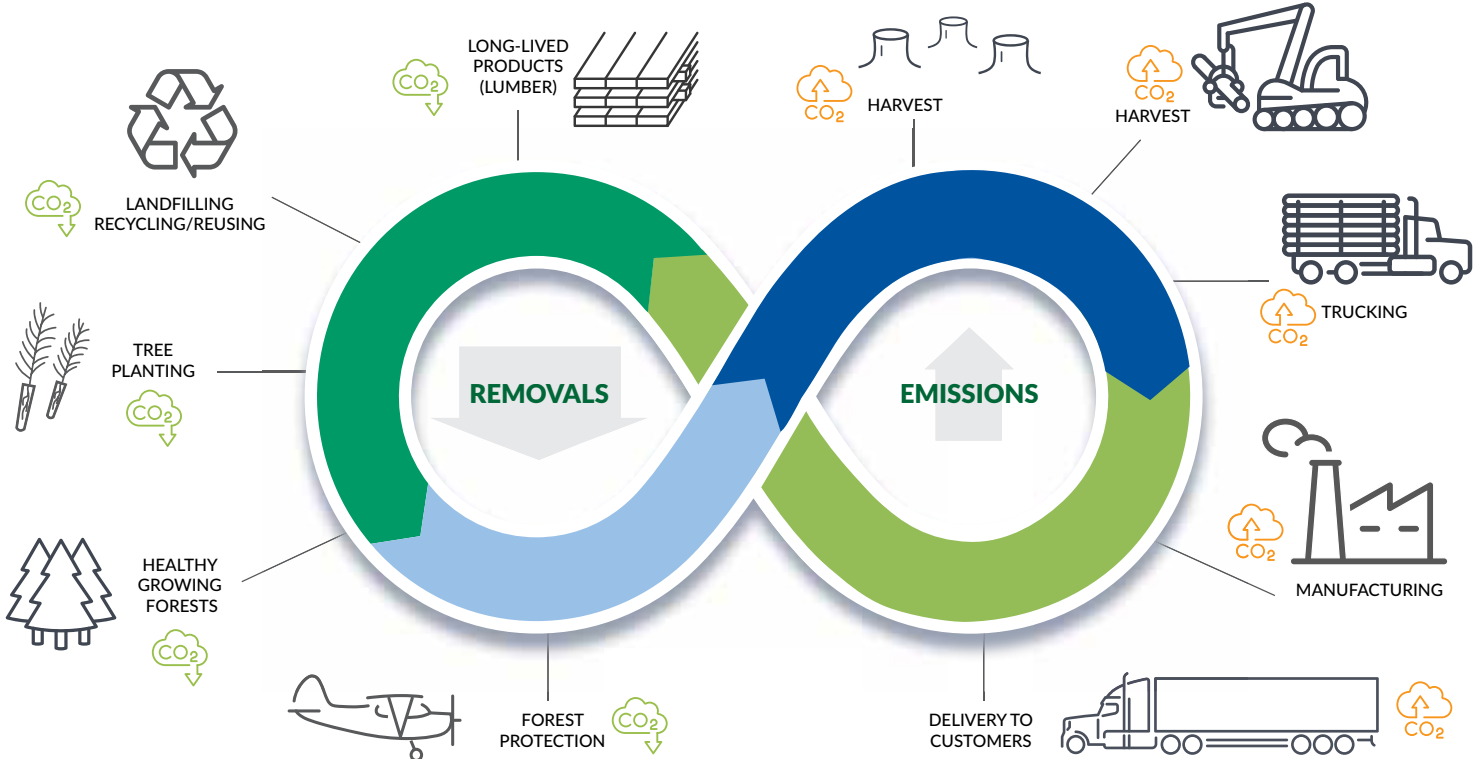
The organizational GHG footprint encompasses activities within the financial control of JDI in the following major categories in the Supply Chain:

- Scope 1, 2 and 3 (Category 1-8) GHG emissions
- Net Forest Growth from freehold forests
- Net transfer of carbon dioxide to harvested wood products

Additional information on our detailed methodology, assumptions, exclusions, data quality and uncertainty can be found in our technical supplement on our website, www.jdirvingsustainability.com.



The Forest Carbon Cycle



Climate Change Impacts and Mitigation Strategies

Climate change related risks have the potential to disrupt operations and increase costs over the medium to long-term and we actively seek ways to mitigate risk. These risks include changing precipitation and temperature shifts as outlined in the chart below.

Physical Risks	Risk Description	Strategies to Mitigate Risks
<div>RISK Changes in precipitation and sea levels</div> <div>IMPACT Production disruption</div> <div>Increased capital cost</div> <div>TIMEFRAME Medium to long-term</div>	<ul style="list-style-type: none">• Flooding increases will impact facilities near rivers.• Sea level rise could impact Irving Pulp & Paper near the Bay of Fundy.• Increased intensity and frequency of rainfall events could impact stream crossings, cross drain culverts and drainage ditches on forest access roads.• Increased droughts will impact the surface water supply for pulp, paper and tissue manufacturing operations.	<ul style="list-style-type: none">• Assessing and upgrading infrastructure to prevent flooding at manufacturing facilities. (Irving Pulp & Paper completed the flood mitigation project in 2022.) (C)• Building inventory of stream crossings, culverts and ditches to assess functionality and replacement schedule. (P)• Designing new and replacement stream crossings with 1.2 times the 100-year flood prediction since 2016. (C)• Irving Pulp & Paper's new Environmental Treatment Facility that is estimated to halve freshwater consumption will be operational in 2025. (P)• Irving Pulp & Paper's full water use assessment and conservation plan to reduce water consumption and water use intensity with each planned upgrade. (C)
<div>RISK Gradual changes to forest growth and species distribution</div> <div>IMPACT Reduced wood supply – volume or by species/product</div> <div>TIMEFRAME Long-term</div>	<ul style="list-style-type: none">• Potential impacts to the distribution of tree species in the Acadian Forest at the landscape scale. Conifer species like Balsam fir and black spruce are important to lumber and pulp and paper production.• Potential drought periods will impact tree growth and species distribution on specific sites with higher water stress (excessively well-drained sites or shallow soils).	<ul style="list-style-type: none">• Active monitoring and detection program for changes in growth and yield or species shifts. (P)• Following guidance of locally driven research on expected tree species distribution under a range of climate scenarios. (P)• Maintenance of multiple age classes and species combinations across the landscape. (P)• Tree improvement program allowing for the selection of resilient parents and individuals. (P)• Shortened planted area rotations (40 years) to reduce the risk of longer-term changes to tree growth and yield. (P)• Active research on drought resiliency by adapting densities and water use. (P)• Species & site matching with intensive silviculture practices. (P)• Adaptable 80-year management planning process reforecast every five years. (P)• Shifting to deeper rooted species to increase drought tolerance and wind resistance. (P)

Physical Risks	Risk Description	Strategies to Mitigate Risks
<div>RISK Increase in catastrophic events – wildfire, forest pests and windthrow</div> <div>IMPACT Reduced wood supply</div> <div>TIMEFRAME Medium to long-term</div>	<ul style="list-style-type: none">• Increased frequency or severity of wildfires will impact short and long-term wood supply across freehold, Crown and private lands. Planted conifers on freehold and Crown land are highly susceptible to wildfire.• Interface wildfires (meeting of woodlands and human developments) could impact infrastructure and homes in rural communities that support operations, sawmills, wood yards and remote logging camps.• Changing temperature could impact the climate's suitability to new forest pests (insects or disease) or increased stress on trees could raise susceptibility to existing forest pests.• Increased strength and frequency of winds raises the risk of landscape-scale catastrophic blowdown events and/or multiple single tree blowdown events.	<ul style="list-style-type: none">• Investments in infrastructure, tools and training to ensure safe and aggressive wildfire response:<ul style="list-style-type: none">• Airstrip upgrades completed in 2021. (C)• New monitoring aircraft purchased in 2021. (C)• New fire trucks purchased and delivered in 2022. (C)• New single engine air tankers replaced existing fleet in 2023. (C)• 2020 MOU with New Brunswick Department of Natural Resources on fire response and enhancing JDI training to national standards. (C)• Investments in mechanized firefighting to reduce reliance on human resources initiated in 2020. (P)• Forest fuel mapping. (P)• Maintaining awareness of new forest pests. (P)• Species & site matching with intensive silviculture practices. (P)• Participation in the Natural Resources Canada-led Spruce Budworm Early Intervention Strategy Program, with the potential to apply lessons learned to new forest pests. (P)• Annual monitoring and detection of stressed trees and mortality, windthrow and blowdown. (P)• Immediate salvage harvesting of catastrophic losses with an adaptable management plan. (P)• 80-year management planning process re-forecast every five years. (P)

(C): Complete (P): In Progress (II): To Investigate



Carl Hovey & Doug Armstrong | Nova Scotia Woodlands

Opportunities

A changing climate, government policies and shifts in consumer behaviours associated with a concern for the environment could result in opportunities for the Supply Chain as it responds to an increasing demand for renewable forest products and bioenergy.

Opportunity	Description Of Opportunity	Strategy To Execute
Increased demand for renewable building products	The demand for renewable and low carbon building products to replace concrete and steel will benefit lumber producers. This includes traditional lumber products in addition to mass timber, engineered wood products and panels for construction.	<ul style="list-style-type: none">• Focus on silviculture practices that increase sawlog production, such as species site matching, aggressive early competition control techniques and commercial thinning. (P)• Increase investments in sawmill technology focused on improving recovery. (P)• Match future sawmill growth to the growing wood supply. (P)• Investigate innovative building products such as cross-laminated timber. (I)
Increased demand for renewable packaging products	The demand for alternatives to single-use plastics will continue to grow. There is the opportunity to produce more renewable alternatives or to wrap finished consumer goods with paper.	<ul style="list-style-type: none">• Increase the production of kraft pulp, which can be used to produce renewable packaging. (P)• Reduce plastic waste in consumer goods packaging by switching to alternative solutions. (P)• Increase the quality of corrugating medium products. (P)
Increased demand for renewable energy	With the growing wood supply and growth in forest products manufacturing opportunities, there will be an increase in the amount of residual biomass that could be converted to energy (e.g. more bark, lignin, sawdust, shavings and unused forest residues).	<ul style="list-style-type: none">• Explore opportunities to produce more green electricity from waste steam at Irving Pulp & Paper. (P)• Explore opportunities to use excess hot water from Irving Pulp & Paper. (I)• Increase wood pellet production from sawmill residues. (C)• Investigate opportunities for wind power on freehold lands. (P)• Investigate the opportunity to use surplus bark (hog fuel) for new green energy production. (P)

Transition Risks in the Forest Supply Chain

Assessments by the ESG Steering Committee found that government policies regulating fossil fuels will result in transitional risks for the Forest Supply Chain. These inflationary risks include increases to direct and indirect energy costs like electricity as well as fossil fuel-powered manufacturing and transportation costs. It is not possible to pass all these costs on to customers. Our Steering Committee has oversight into decarbonizing initiatives like fuel switching, fuel efficiency and green energy generation.

Transition Risk	Risk Description	Strategies To Mitigate Risks
RISK Canadian Federal Carbon Tax Policy IMPACT Increased cost TIMEFRAME Short-term	<ul style="list-style-type: none">• The Canadian federal price on carbon will move from \$80 per tonne in 2024 to \$170 per tonne in 2030, impacting large emitters under an Output Based Pricing System.	<ul style="list-style-type: none">• Robust accounting of the Forest Supply Chain carbon footprint to identify sources of GHG emissions and prioritize risks and opportunities. (C)• Fuel efficiency initiatives (short-term). (P)• Reduction in equipment idling. (P)• Switching to higher payload trucking configurations (tridem drive trucks). (P)• Switching from energy-intensive full tree harvesting and in-woods chipping systems. (C)• Increasing the use of rail freight. (P)• Tools, technology and best practices to improve productivity. (I)• Fuel-switching (medium term).• Hybrid or electrification of mill yard equipment. (I)• Fuel efficiency initiatives at large industrial sites (short-term). (P)• Energy efficiency audits in tissue mills to increase productivity and increase reuse of heat and steam. (P)• Fuel switching at Irving Paper Limited to purchase steam from nearby electrical generation facility rather than consuming natural gas to generate steam. (I)• Increasing capacity at Irving Pulp & Paper to use more black liquor and other biomass sources. (P)
RISK Canadian Federal Climate Policy – electricity generation IMPACT Increased cost TIMEFRAME Medium-term	<ul style="list-style-type: none">• Federal climate policy mandating the closure of coal fired electricity generation creates significant uncertainty to the New Brunswick and Nova Scotia electricity supply and increased cost structure. Increasing electricity costs will have a significant impact on high electricity users like Irving Paper.• Significant debt loads at NB Power limit the ability to transition fossil fuel generating stations, add distribution associated with renewable energy and maintain existing hydro and nuclear facilities. Electricity costs are highly likely to rise.	<ul style="list-style-type: none">• Using surplus electricity from Irving Pulp & Paper capacity improvements. (P)• Exploration of wind power investments. (P)



SAFETY MANAGEMENT SYSTEM MATURITY

In 2024, we worked to make sure the structure of our Safety Management System was understood and communicated across our operations.

Our Safety Management System allows us to take a more systematic approach to the actions and procedures that go into managing health and safety across our sites and work locations.

Over the last year, we worked to improve the quality and standardization of our processes with the aim of producing safer workplaces for our employees, contractors and members of the public. The result

is a more consistent approach with processes in place to define roles and responsibilities and ensure they are well understood.

Key to the success of our system is a Safety Management System Maturity Assessment. This measures the system for both its content and the effectiveness of its implementation. To this end we use international standards and external resources to benchmark with other organizations. Going forward, this will set a new expectation for Safety Management Systems across our organization.

“By taking a more systems-based approach to Health & Safety measurement, rather than only using injury statistics, our Safety Management System is maturing. We are heading in the right direction.”



Julian Hogeterp, Senior Director, Corporate Safety and Health Services

SAFETY

Safety is one of our values. Our goal is to eliminate workplace injuries and illnesses with a target of zero critical injuries. We continue toward this target through proactive safety management and by sharing best practices across our operations. Our efforts to continually improve our health and safety management system and prevent incidents include leveraging technology and analytics, using leading indicators, and taking care of our people. Evaluation of our safety management system involves more indicators than just injury numbers. We also review our safety performance through our training compliance, inspections and the identification of hazards and reporting of near misses.

Our Injury Performance

Our standard safety definitions are based on the United States Occupational Safety and Health Administration (OSHA) criteria for injury recording as well as provincial requirements for injury reporting as set out by the respective Workers' Compensation Boards and Regulators (e.g. Ministry of Labour and equivalent). This allows us to be aligned not only across our own businesses but also with other North American organizations, making it easier to measure, evaluate and compare our injury statistics.

We track the **Recordable Incident Rate (RIR)**, the North American standard for measuring injury performance. It measures the number of recorded injuries per 200,000 exposure hours. In addition to the RIR, we review the **Lost-Time Injury Rate (LTIR)** and the **Critical Injury Rate (CIR)** as key safety metrics to provide better context to the type and severity of injuries. Both are subsets of the Recordable Incident Rate.

The only acceptable target number for injuries is zero. Although a difficult metric to accomplish, it remains our goal to achieve a rate of zero critical injuries. We have created an internal definition for critical injuries based on the criteria of the United States Occupational Health Administration and provincial requirements for injury reporting as set out by the respective Workers' Compensation Boards and Regulators criteria.



REPORTING STANDARD

- GRI 403-1
- GRI 403-2
- GRI 403-4
- GRI 403-5
- GRI 403-7

Refer to reference tables on p. 107

GOVERNANCE

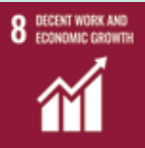
- Health & Safety Policy
- Safety Orientation

VERIFIED SUBJECT MATTER

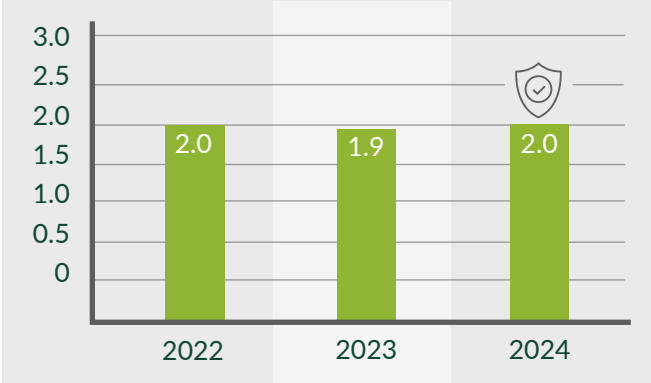
- Recordable Incident Rate
- Lost-Time Injury Rate
- Critical Injury Rate

See statement on pp. 110-114

STRATEGIC SDGS



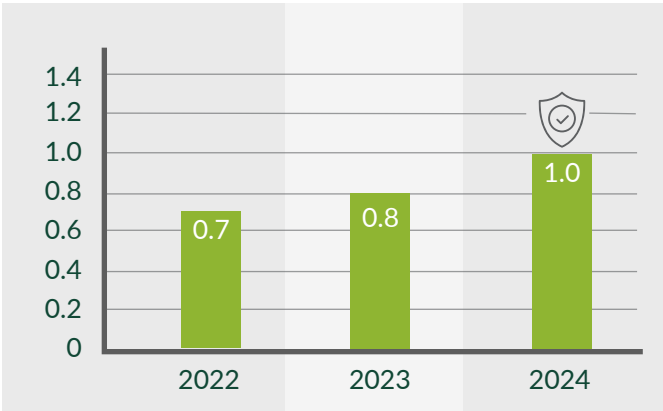
RECORDABLE INCIDENT RATE



Recordable Incident Rate: A trailing indicator focused on past performance that includes injuries requiring medical attention beyond first aid, ranging in severity from minor to severe.

Management Analysis: The three-year trend for our Recordable Incident Rate has been stable, with very little fluctuation year-over-year since 2022. RIR continues to be the primary trailing indicator used to measure injury performance.

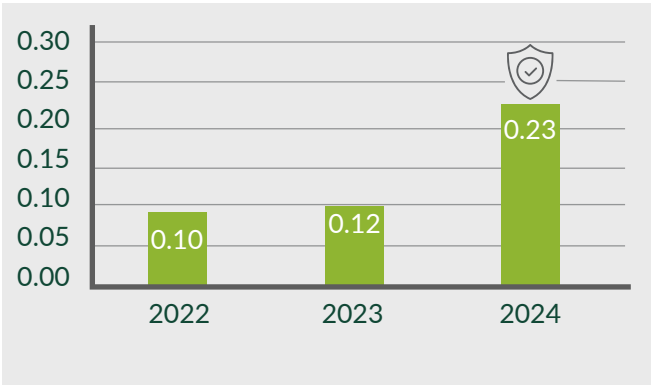
LOST-TIME INJURY RATE



Lost-Time Injury Rate: A measure for workplace-related injuries that cause employees to lose time working.

Management Analysis: The Lost-Time Injury Rate climbed slightly year-over-year to 1.0 injury for 200,000 hours worked. There were increases in Lost-Time Injuries in Tissue plant operations.

CRITICAL INJURY RATE



Critical Injury Rate: Identifies injuries that are more severe and/or have the potential to result in a more serious injury like a fracture.

Management Analysis: A climb in the Critical Injury Rate in 2024 was driven by an increase in injuries falling under the fracture category. To respond to this increase, we are sharpening our focus on risk management and on Serious-Injury and Fatality potential when it comes to identifying hazards that can cause severe injury. Since 2023, the largest increases in the Critical Injury category have been in Sawmills and Tissue plants.



Denis Martin, Grand River Pellets | Saint-Léonard, NB

CONTINUOUS IMPROVEMENT

Risk Management and Prioritization of Hazards
Our shift from injury management to risk management is part of our journey to improved safety management and injury prevention. This approach reduces our Risk Assessment Prioritization Index, a process that involves prioritizing hazards based on the severity and potential harm that could result if left unmanaged. This informs the level of controls we apply to all identified hazards. We then measure control effectiveness and risk reduction.

A Showcase of JDI Safety Technologies
Technology supports our Safety Management System by helping us analyze our data and standardize our management processes to improve efficiency. In 2024, we hosted a Showcase of JDI Safety Technologies to demonstrate the value and benefit of the tools we use to support our health and safety professionals. At the event, held

during our 2024 JDI Health and Safety Summit in Moncton, N.B., our safety team received training and short demonstrations of the technology available to support them and our operations.

Investigating Risk Management Solutions Using Artificial Intelligence (AI)
In 2024 we investigated how Artificial Intelligence can be applied to injury prevention and enhancements in safety technology. As the data input volume into our health and safety information systems increases and technology advances, we are looking at how AI could help our health and safety professionals by providing insights that can be quickly summarized. We are also investigating the incorporation of AI into our prevention programs with camera technology and hazard identification data.



CRITICAL INJURY
RATE OF ZERO

FORT EDWARD ERGONOMICS COMMITTEE
Driving Improvements in Soft Tissue Injuries

A new ergonomics committee driven by people working on the ground at our Fort Edward, NY tissue plant is helping to reduce soft tissue related incidents at the site.

The employee-led committee is a cross-functional team representing each of the site’s departments. Meeting once a month, team members review ergonomic hazard identifications and risk assessments to discuss improvement plans.

Ergonomics refers to designing workplaces to fit the needs of workers. The aim is to mitigate musculoskeletal injuries like strained muscles, strained joints and soft tissue injuries, with posture and pulling, pushing or lifting heavy objects being common risk factors. Employees on site are trained in ergonomics and hazard awareness. This means the hazards discussed by the committee were first identified by on-the-floor team members.

For Alysa Rochminski, a manufacturing engineer who leads the committee, this is key to the committee’s success. On top of leading the committee meetings, Alysa also conducts the ergonomic risk assessments. Once an assessment is completed, the committee works to develop an improvement plan and takes before and after measurements to track improvements. Since the committee first formed in 2024, the Fort Edward site has seen a reduction in soft tissue injuries.

“Employee involvement is really key, because that’s where we get most of our information,” Alysa said. “Having that feedback from the floor really lets us know where we need to be focusing our efforts.”

We actively encourage employees to identify hazards and report observations and near misses. When employees participate and take ownership of health and safety, our workplaces are safer.



“Employee involvement is really key, because that’s where we get most of our information. Having that feedback from the floor really lets us know where we need to be focusing our efforts.”

Alysa Rochminski, Manufacturing Engineer



Community Engagement

EXPANSION BOOSTS LOCAL ECONOMY

\$600-million expansion at Irving Tissue Macon

Irving Tissue marked its fifth anniversary in Macon, Ga. in 2024 by announcing a \$600-million expansion to the plant that will create new jobs and grow economic opportunities in the community.

Since 2017, when the Macon tissue manufacturing plant was announced, Irving Tissue’s investments in Macon have totaled about \$1.5 billion. The facility’s construction and Phase 2 expansion generated 2.5 million person hours of work, providing opportunities for dozens of Georgia contractors and subcontractors. The Phase 3 expansion will generate another 1.2 million person hours of work.

Irving Tissue produces high quality household paper products like bath tissue and paper towel. The Macon expansion involves the addition of a third ThruAir Dry paper making machine, new converting lines and a fully automated warehouse.

It will bring the plant’s total annual capacity to 225,000 tonnes, the equivalent of 45 million cases of product. To make this happen, the plant will grow to employ 500 people, adding another 100 jobs in the Macon community.

Because of our integrated value chain, Irving Tissue’s expansion in Macon will also mean economic growth in communities to the northeast. Trees from land we manage in the working forests of Maine and New Brunswick are used to make pulp at Irving Pulp & Paper in Saint John, N.B., which supplies the Macon facility.

A well-managed working forest works for customers and communities. The Macon Irving Tissue plant is an example of how the working forest supports communities by growing local economies and supporting local jobs.



“Irving has been more than just a business in Macon – they’ve been a true member of our team. They have a deep commitment to our community and its people, and their decision to expand here speaks volumes about the strong foundation they’ve built.”

- **Lester Miller, Mayor of Macon-Bibb County**

COMMUNITY ENGAGEMENT

Across our operations, the working forest supports local communities and economies through capital investment, jobs, taxes, population growth and retention, recreation and tourism. The working forest also establishes a strong foundation for the next generation by enabling scholarships and education initiatives while also providing well-paying jobs so young people stay in their communities after graduation. Supporting and engaging with our communities takes many forms, and we are committed to making our communities even greater places to live, work and play.

Economic Impact

The working forest is a source of well-paying jobs and spin off benefits to local economies – the foundation of vibrant communities. Our Forest Supply Chain operations support the local and regional economies in communities throughout New Brunswick, Maine, Nova Scotia, Georgia, New York and Ontario.

\$1.5 billion spend on local suppliers

\$316 million in capital investments



REPORTING STANDARD

✓ GRI 2-29

Refer to reference tables on p. 105

VERIFIED SUBJECT MATTER

- Community Engagement Spend - Donations
- Community Engagement Spend - Scholarships

See statement on pp. 110-114

Strategic SDGs



2024 CAPITAL INVESTMENTS



\$267 Million Pulp and Paper

- Modernizing Equipment
- 350 Construction Jobs



\$21 Million Sawmills

- New Debarker
- New Stud Log Scanners



\$5 Million Woodlands

- Nursery Growth
- Yard Growth
- New Sussex Garage



MAINTAIN OUR COMMUNITY DONATIONS PROGRAM.



\$169,745 (CAD)
in scholarships granted

+



\$585,727 (CAD)
in charitable donations

\$755,472 (CAD) total*
Community Engagement Spend in 2024

*This includes scholarships and donations only related to the Forest Supply Chain.

Supporting the Next Generation

Having our communities be the places our youth choose to stay and build their careers means ensuring there are diverse employment opportunities with competitive wages and benefits in their home communities post-graduation. Matching education and training with these jobs is key. It's why investing in the talent of the next generation is important to us, and we seek to reach thousands of students of all ages through the educational initiatives we support each year.

In 2024, we granted \$169,745 (CAD) in various scholarships to support students in their post-secondary studies. We also support students throughout their education with paid work term opportunities. To the post-secondary institutions themselves, we contribute to capital fundraising campaigns, make donations and provide scholarships and support education and skilled trade training programs.



NICOLAS CASTONGUAY

First of Its Kind Scholarship Supports Students in Northern New Brunswick

Nicolas Castonguay of Grand Falls, N.B. was one of the inaugural recipients of our Northern New Brunswick Trades & Engineering Scholarship and has now started on full time as a millwright at our Saint Léonard Sawmill.

The scholarship, launched in 2023, supports students pursuing careers in high demand fields in engineering and skilled trades. It helps cover tuition fees, provides paid work term employment and offers recipients full time work in our Sawmills and Woodlands operations after they graduate.

Nicolas was one of eight students to receive the scholarship in its first year. After studying at the New Brunswick Community College Youghall campus in Bathurst, N.B., Nicolas finished his

program in spring 2025 and had a job lined up as a millwright apprentice before he graduated at the Saint Léonard Sawmill, not far from where he grew up.

"The scholarship helped me by allowing me to focus more on studying and less on worrying about money. It also opened doors to opportunities I might not have had otherwise," Nicolas said. "It was reassuring for me that I would have a good job after college and not need to search."

Open to students living in Northern New Brunswick, the scholarship aims to develop a pipeline of local talent for jobs in our Sawmill and Woodlands divisions in this region.

"I chose this career because I've always been passionate about solving problems. I enjoy the challenge of finding creative solutions and seeing the positive impact my work has. So far, I like the variety of tasks and the opportunity to learn new things every day."

Nicolas Castonguay, Millwright Apprentice



Housing Built For Newcomers | Chipman, NB

Supporting Immigration

Recognizing the need for skilled workers in key roles in cases where we can't fill the roles locally, we've invested in newcomer attraction and supports since 2017. We invest in language training, education and transportation alongside settlement agencies to help newcomers settle and set down roots in our communities.

In 2024, we brought 91 newcomers plus their families to join our operations in our Sawmill and Woodlands divisions, boosting population growth in rural communities.

Partnering with the Chipman Housing Authority and a local developer in Chipman, N.B. since 2022

we've supported the development of mini-homes and town homes to boost the local housing supply as the population grows. This initiative has added a total of 18 town homes and 12 mini homes.

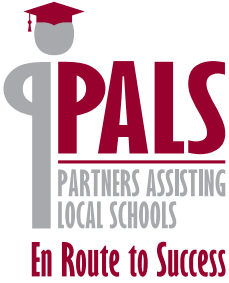
In 2024, we partnered with the Housing Hub of New Brunswick, the Government of New Brunswick, Canada Mortgage and Housing Corporation, the Municipality of Grand Lake and the Chipman Housing Authority to build 40 new homes as part of a first of its kind rent to own program under New Brunswick's Rural Workforce Housing Pilot. Construction on the first 19 homes began in 2024 and these will be move-in ready in summer 2025.

Community Contributions

We believe in giving back to the communities where we operate. In 2024, our companies that make up the Forest Supply Chain donated \$585,727 (CAD) to charitable causes, enabling everything from community services to youth sports. Our sponsorship of festivals and events like the Can-Am Crown International Sled Dog Race in Fort Kent, Maine, the Atlantic Balloon Fiesta in Sussex, N.B. and the Tri-Lake Fishing Tournament in Grand Lake, N.B. add to the cultural vibrancy of communities and support tourism. Our employees also contribute many volunteer hours each year through initiatives like Habitat for Humanity in Macon, Ga and planting trees with Mission Green Toronto.



Atlantic Balloon Fiesta | Sussex, NB

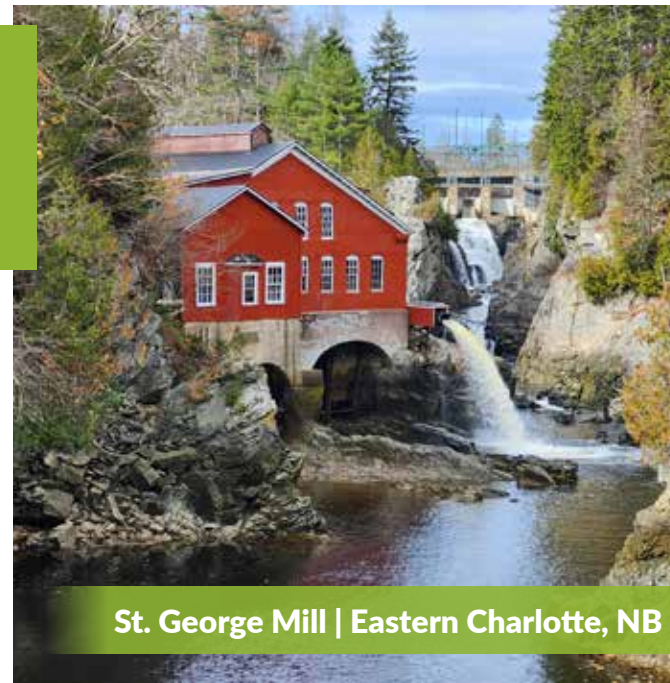


Our annual support of PALS (Partners Assisting Local Schools), the Boys and Girls Club and other similar initiatives goes toward encouraging and inspiring young people to consider continuing their education and growing their careers within their own community. Hundreds of JDI volunteers are now working with students and schools to make a positive impact in the lives of young people. To date, more than 65,000 hours of JDI employee volunteer time have been dedicated to PALS, which will celebrate 25 years in 2025.



PALS | Saint John, NB

In 2024, we undertook efforts to spruce up the historic St. George Mill in Eastern Charlotte, N.B., helping to preserve the iconic landmark and tourist magnet for the community. Dating back to 1904, the iconic red structure sits at the foot of the picturesque St. George Gorge and is a popular tourist draw, attracting visitors from around the world. The building ceased operation in 2003, and over the succeeding years, age and extreme weather had started to take their toll. Refurbishment efforts involved clearing out interior debris and painting the façade to restore its brilliant red colour. Structural work will take place in 2025.



St. George Mill | Eastern Charlotte, NB

Our four nature parks offer recreational opportunities for locals and tourists alike each year. The Irving Nature Park in Saint John, N.B. and the Irving Eco Centre at La Dune de Bouctouche, N.B. have collectively hosted more than 10 million visitors in more than 30 years, with over 560,000 visitors in 2024 alone. Our other parks include Wolastoq Park in Saint John, N.B. and the Irving Arboretum in Bouctouche, N.B. Maintained and made available free of charge to the public, these parks also play a vital role in wildlife habitat protection.



Irving Nature Park | Saint John, NB



**La Dune de Bouctouche
Bouctouche, NB**



**Wolastoq Park
Saint John, NB**



**Irving Arboretum
Bouctouche, NB**

Community engagement

As an active member of the community, we invite members of the public to our businesses through tours of our operations, stakeholder meetings and by participating in local events. We also use social media to engage with several key audiences by sharing educational content about the working forest. These platforms also provide the public with an opportunity to connect with us directly.

In 2024 we launched the Working Forest campaign and website NBWorkingForests.com to enhance our community engagement. Our goal is to build relationships with stakeholders, community members and employees to enable a mutual understanding of our operations and impact.



Check us out online!

56,000+
FOLLOWERS ACROSS
PLATFORMS IN 2024



**FOLLOW IRVING
WOODLANDS:**





EMBRACING OUR VALUES

Celebrating Inclusion and Belonging

We celebrate diversity and recognize that our work is better when we have people with diverse backgrounds and experiences working together.

One event where this is on display is at the annual Permanent Residents Gala in the Municipality of Grand Lake, N.B. The gala is a chance to celebrate alongside employees in our Sawmills and Woodlands divisions who've received their permanent residency status in the last year. We assist employees with the permanent residency process, and in 2024, we recognized 75 people from the Grand Lake community who received their permanent residency, representing 25 families from six different countries.

More than anything, the gala provides a venue for employees and members of the community to share cultures.

We actively encourage our employees to celebrate what makes us unique and learn from our differences all throughout the year. We offer opportunities for inclusion training and certification courses, support employee resource group development and provide chances for employees to share lived experiences and learn from each other.



PR Celebration Gala | Municipality of Grand Lake, NB

ETHICS, VALUES & INTEGRITY

We take a comprehensive approach to ethical business practices and integrity, applying it to governance and how we conduct ourselves. Part of this means we require every employee to complete all training related to their job function and comply with our governance policies, which include:

- Code of Business Conduct
- Health & Safety Policy
- IT Policy
- Safe & Respectful Workplace
- Drug & Alcohol Policy
- Safety Orientation
- Whistleblower Policy


Responsibility for our governance and legal compliance is administered by our Vice President Legal in coordination with digital tracking by JDI IT.

Code of Business Conduct

The Code of Business Conduct is a company policy that applies to all employees. Compliance to the Code of Business Conduct is a condition of employment for all employees whose position empowers them, or may reasonably be perceived as empowering them, to influence company decisions.

Key topics in our Code of Business Conduct:

- Conflicts of Interest • Gifts and Gratuities • Insider and Other Trading • Relationships with Competitors • Business Records • Anti-Corruption and Bribes • Confidentiality • Information Security • Company Property Resources • Whistleblowing

In 2024, **74.7 per cent**  **of all new employees in the compliance group**¹ within the Forest Supply Chain signed off on the Code of Business Conduct Policy as part of their orientation process. After hiring, all employees with regular JDI network access must reconfirm annually their compliance of the Code of Business Conduct, including any updates to the policy.

1] The Compliance Group includes management roles, professional roles, and includes the Company's salaried (non-hourly) workforce. It does not include employees whose employment is governed by a collective agreement.



REPORTING STANDARD


- ✓ GRI 2-7
- ✓ GRI 2-15
- ✓ GRI 2-27
- ✓ GRI 205-2
- ✓ GRI 205-3
- ✓ GRI 206-1
- ✓ GRI 418-1

Refer to reference tables on pp. 105-107

GOVERNANCE

-  Code of Business Conduct
-  IT Policy
-  Safe & Respectful Workplace
-  Drug & Alcohol Policy
-  Supplier Social Responsibility Code of Conduct

VERIFIED SUBJECT MATTER

-  Code of Business Conduct Compliance
- See statement on pp. 110-114

STRATEGIC SDGS



Whistleblowing and Grievance System

We encourage all employees who witness unethical behaviour or harassment at work to report it to their supervisor or management. Those who wish to remain anonymous can report directly to our anonymous JDI Tips Line, See Something – Say Something, which is staffed 24/7 by trained security officers from our in-house security monitoring centre. Contact Information for the Tip Line is contained within the Code of Business Conduct.

All anonymous tips are reviewed and actioned by an independent investigator. Physical security of all buildings and assets is also managed by our professional internal security team, including a team of investigators.

Maintaining Public Integrity

Keeping integrity and ethical behaviour at the forefront, we are mindful of transparency and remain committed to sharing information with stakeholders.

Our approach:

- The Forest Supply Chain will continue to publish an annual Climate, Conservation and Community Impact Report.
- We regularly meet with stakeholder groups, host open houses and offer tours with our staff.
- We continue to enhance our social media presence to communicate and build relationships with a new, wider audience.
- Our interactions with federal, provincial and state governments are in full compliance with lobbying activity regulations and are reported as required in the applicable lobbyist registry.

Belonging and Inclusion

We focus on creating an inclusive environment where everyone feels welcomed, appreciated and encouraged to contribute fully. Our values are rooted in working together and ensuring everyone is treated with fairness and respect; while belonging and inclusion are key components to delivering on our employee experience strategy.

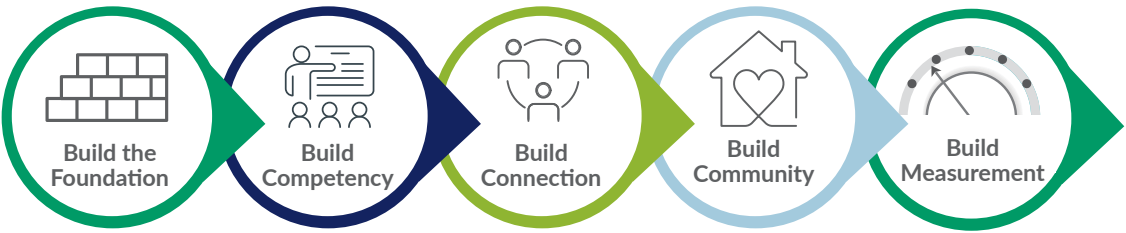
We believe our operations are strengthened by diverse ideas and experiences and we are committed to developing a diverse workforce pipeline. In 2024, we continued to invest in immigration and settlement programs to ensure newcomers stay and put down roots in our communities.

As a company, we also invest in multiple initiatives each year that encourage women to pursue non-traditional fields in STEM (science, technology, engineering and math) and skilled trades. We partner annually on Girls STEM UP and we support Women in the Woods and New Boots with the MAP Strategic Workforce Series to cultivate awareness and inspire women and girls to pursue careers they might not otherwise consider.



PUBLISH AN ANNUAL CCC REPORT FOR THE FOREST SUPPLY CHAIN.

Road Map to Inclusion



Progress in 2024

In 2024, we built upon the existing momentum for building organizational competency and measurement of diversity, equity and inclusion:

- We launched a voluntary self-identification program within our HR System to enable our businesses to learn more about the makeup of our workforce. This will help us ensure we are tailoring our programs and benefits to meet the needs of all employees.
- We refined our gender movement dashboard to enable gender-based data analysis at the site level. This dashboard measures how gender is represented throughout the organization, providing better data for us to understand what is happening with respect to gender representation across the company.

- We continued to host educational panels on topics such as gender and racial bias, active allyship and mental health.
- Employees across the Forest Supply Chain completed 496 courses towards the Diversity, Equity and Inclusion Certificate program.

Education continues to be a main area of focus in our work to build an inclusive environment where everyone feels supported to reach their full potential. We continue to evolve our work environment in ways that improve employee engagement and retention across all employees, including among traditionally underrepresented groups.

NICOLE ROSS
Inspiring the next Generation of Women in STEM

Nicole Ross is an environmental engineer who has played a role in some of our largest projects, and now she’s inspiring the next generation of women engineers to do the same.

Graduating with a degree in chemical engineering in 2017, Nicole worked in a variety of positions in the field before joining JDI’s environmental affairs team in 2022.

“I was looking for an opportunity to shift my focus into sustainability and environmental compliance work,” Nicole said, adding she’s also enjoyed being able work on a diverse range of interesting projects.

Nicole supported the environmental impact assessment (EIA), a regulatory approval process, for both Project NextGen and Brighton Mountain Wind Farm. Through her role, Nicole provided technical input on greenhouse gas estimates and air modeling, worked with consultants and the

project team to make sure both were aligned and supported public, stakeholder and First Nations engagement.

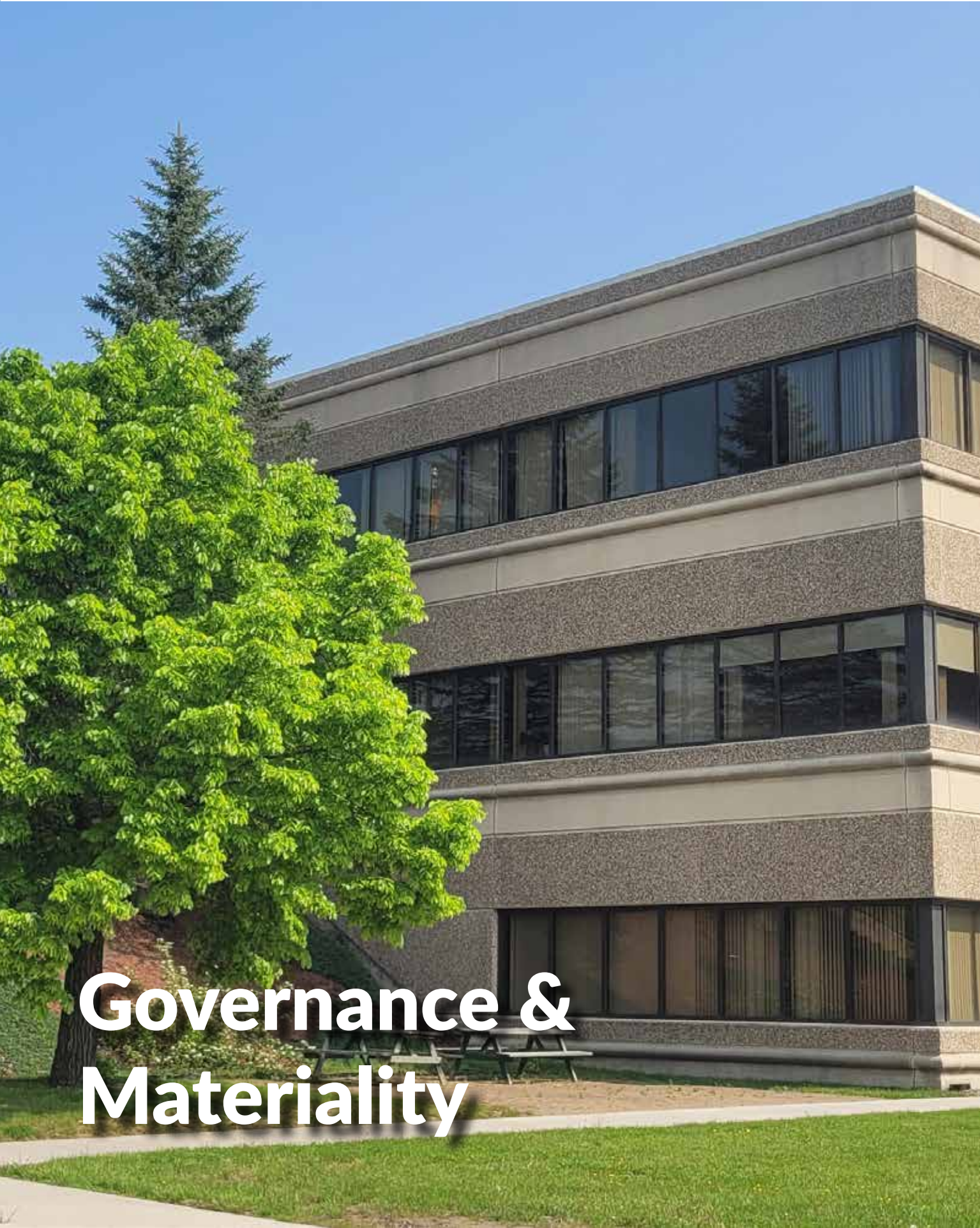
“My objective for my career has been to work on the largest, most impactful projects that improve environmental performance, so working on the EIAs for NextGen and Brighton has been incredible,” Nicole said. “It is great to be part of teams that are passionate and care deeply about the success of these projects. These are massive projects that I didn’t expect to have the opportunity to work on this early in my career.”

By choosing engineering as a career, Nicole was following in the footsteps of her mother, who is also an engineer. Now, Nicole is a role model for others who may not have access to representation of women in STEM fields. She volunteers with Girls STEM Up! – a conference for young women and girls interested in pursuing a career in STEM.

“I would like to encourage women in STEM because the career opportunities are interesting and rewarding, and diversity helps to bring the fresh perspectives we need to solve complex challenges.”



Nicole Ross,
Environmental Engineer

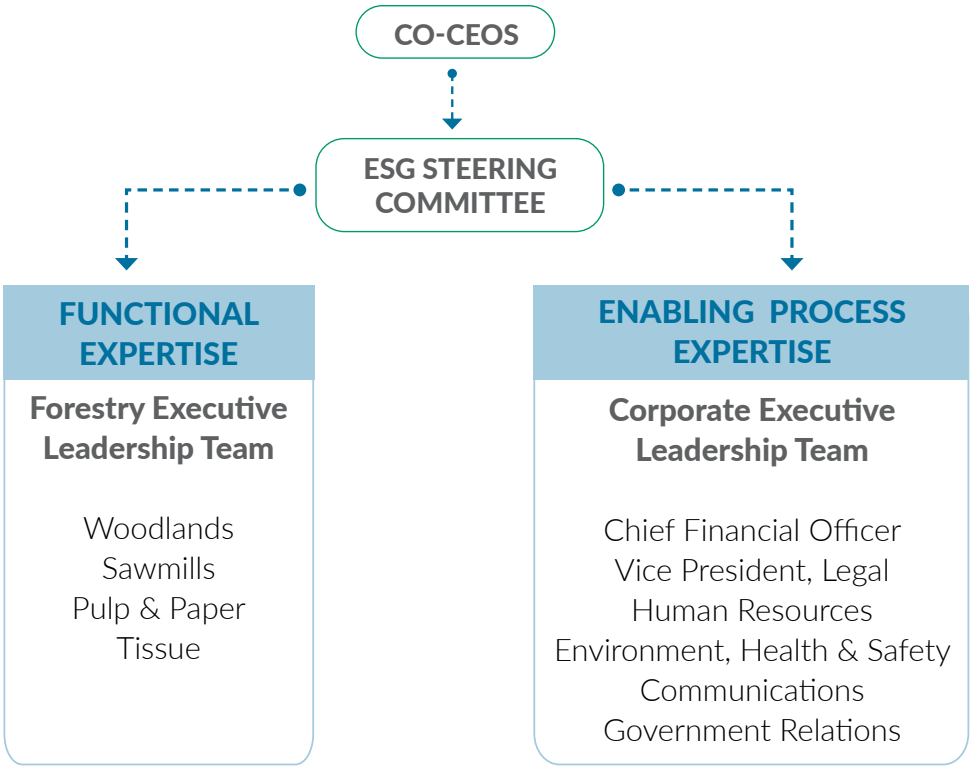


GOVERNANCE & MATERIALITY

Our ESG Steering Committee oversees our sustainability strategy and disclosure. Made up of senior leaders and operating executives from each business in the Forest Supply Chain, the committee meets three times annually and reports its progress directly to the co-CEOs.

Roles and responsibilities of the ESG steering committee

Executives bring forward the expertise of their divisional management teams. Together, they are responsible for sharing ESG-related information with their management teams to ensure information is communicated to all employees and linked to operating plans for execution.



Topics Important to ESG Discussions:
Sustainable forest management • Manufacturing • Customer needs
• Energy use • Air and water impact • Waste • Operations
• Stakeholder expectations • Community partners

Working with the divisional management teams, executives continually identify risks and opportunities in each business, including those associated with climate change. Topics like costs, products, markets, capital projects and the workforce are reviewed annually and quarterly with the co-CEOs. ESG-related risks and opportunities identified in each division are advanced to the ESG Steering Committee and are also reviewed with the co-CEOs during annual budgeting sessions and quarterly performance reviews.

Risks and opportunities in the Supply Chain are identified internally through first-hand experience and engagement with external researchers in various disciplines, such as: forest management, hydrology, genetics, silviculture, pest and wildfire management and engineering disciplines. Guided by internal assessments and the best available science and engineering advice, the members of

the executive leadership teams across our Forest Supply Chain direct the investment of capital and human resources into tools and technologies to mitigate the impacts of climate change and react to opportunities.

We are currently in the process of developing both divisional and enterprise-wide risk assessment frameworks to better identify and assess all risks based on the likelihood of occurrence and the scale of financial impact, among other factors that could impact the company.

The Steering Committee is responsible for producing this ESG report annually to ensure our sustainability approach is communicated to our internal and external stakeholders. This reporting process will continue to improve as it evolves and matures.



Chris Lavoie, Irving Personal Care | Moncton, NB

Materiality and stakeholders

The five material topics that make up this report are tied to one of the three pillars: Environment, Social and Governance. These were identified by internal and external stakeholders and partners during a comprehensive materiality assessment conducted in 2021 by independent, third-party Nanos Research. During this process, a diverse range of individuals and organizations gave input through online surveys and interviews on 18 standard topics.

The five doubly material topics are:

- 1. Sustainable Forest Management
- 2. Ethics, Values & Integrity
- 3. Safety
- 4. Air & Water Quality Management
- 5. Forest Conservation & Biodiversity

To align with the Task Force on Climate-Related Financial Disclosure, we report on climate action, adaptation, greenhouse gas emissions and energy use. We also share highlights from the year across the range of topics and report additional information in the appendix of this report.

The 2021 materiality assessment results continue to guide us, and we monitor all 18 topics. We are committed to refreshing the assessment periodically to ensure our disclosure is aligned with shifting stakeholder priorities. In 2025 in light of economic uncertainty, the decision was made to defer our materiality assessment refresh by one year.

IMPACT ON SOCIETY & THE ENVIRONMENT - EXTERNAL STAKEHOLDERS

- Customers
- Local Communities
- Banking & Insurance
- Government Regulators
- Academia
- NGOs & ENGOs
- Indigenous Rightsholders
- Suppliers & Contractors

IMPACT ON ENTERPRISE VALUE - INTERNAL STAKEHOLDERS

- Divisional Leadership & Finance
- Human Resources
- Woodlands Leadership
- Sawmills Leadership
- Pulp & Paper Leadership
- Consumer Products Leadership

INDEPENDENT STANDARD

JDI FOREST SUPPLY CHAIN ESG TOPICS	GRI*	SASB*	TCFD*
Energy Use & GHG Emissions	✓	✓	✓
Air & Water Quality Management	✓	✓	✓
Sustainable Forest Management	N/A**	✓	✓
Forest Conservation & Biodiversity	✓	✓	✓
Chemical Use	N/A	N/A	N/A
Climate Change & Adaptation	✓	✓	✓
Waste Reduction & Management	✓	N/A	N/A
Consumer Packaging	✓	✓	N/A
Safety	✓	N/A	N/A
Health & Wellness	✓	N/A	N/A
Diversity, Equity & Inclusion	✓	N/A	N/A
Attracting, Developing & Retaining Talent	✓	N/A	N/A
Indigenous Awareness & Inclusion	✓	✓	N/A
Economic Impact, Competitiveness & Innovation	✓	N/A	N/A
Community Engagement	✓	N/A	N/A
Ethics, Values & Integrity	✓	N/A	N/A
Data Privacy & Cybersecurity	✓	N/A	N/A
Supply Chain & Sourcing Policies	✓	✓	N/A

* GRI = Global Reporting Initiative | SASB = Sustainability Accounting Standards Board | TCFD = Task Force on Climate-Related Financial Disclosure
** N/A = not applicable to relevant standard

ESG Topics Map

This chart shows the average importance of ESG topics for internal and external stakeholders. The line represents equal importance among both groups. ESG topics over the line are more important to external stakeholders, while data points under the line are more important to internal stakeholders.



For both internal and external stakeholders, Sustainable Forest Management (9.4 each); Safety (9.4 and 8.9 respectively); Ethics, Values & Integrity (9.3 each); Air & Water Quality Management (9.1 and 8.9 respectively) and Forest Conservation & Biodiversity (8.9 each) are the most important ESG topics related to the JDI Forest Supply Chain.

APPENDIX

In this appendix you will find the following:

Forest Maps

TCFD Reference Table

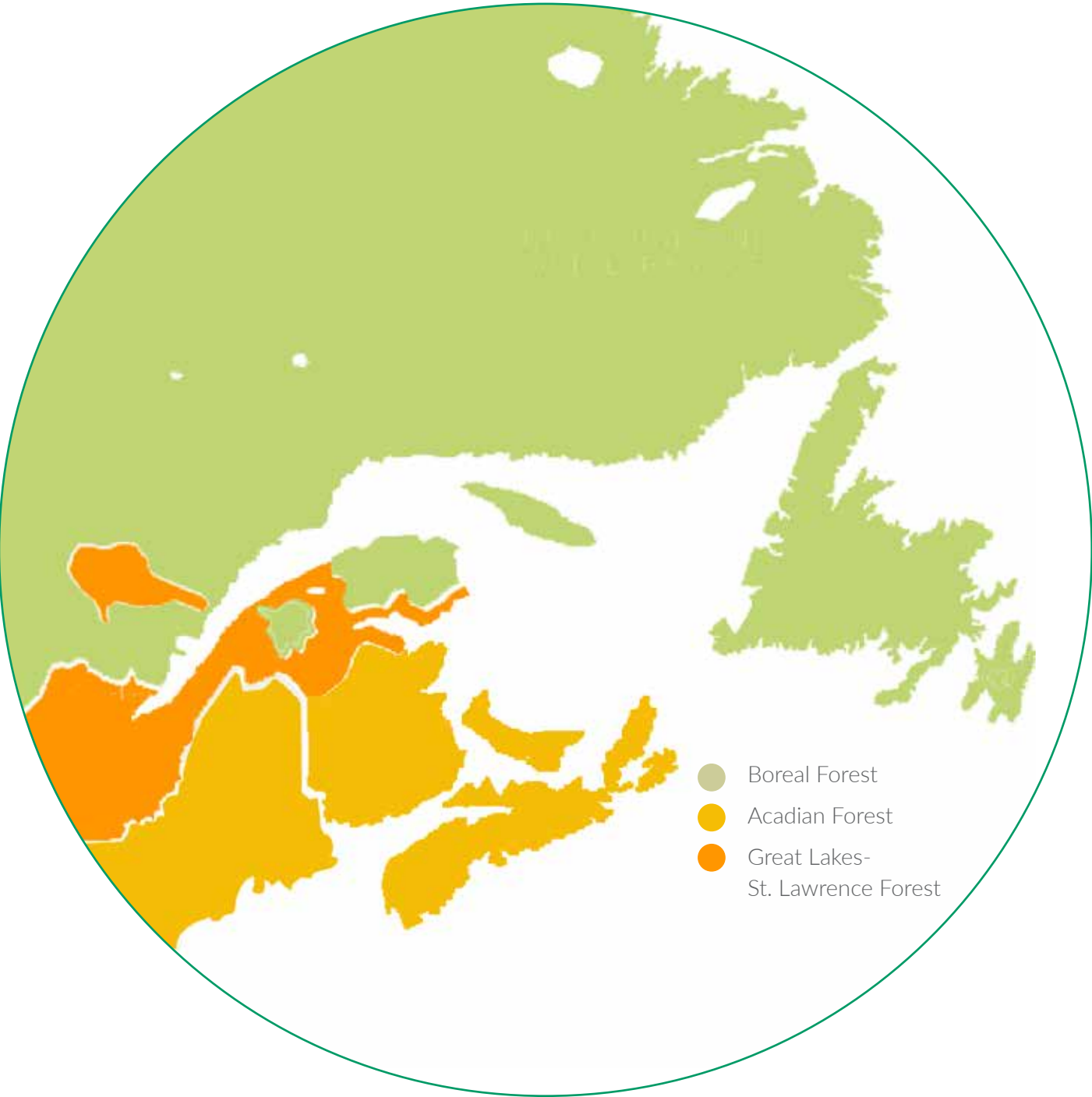
GRI/SASB Content Indexes

Limited Assurance Verification Statement

2024 Performance Data Tables

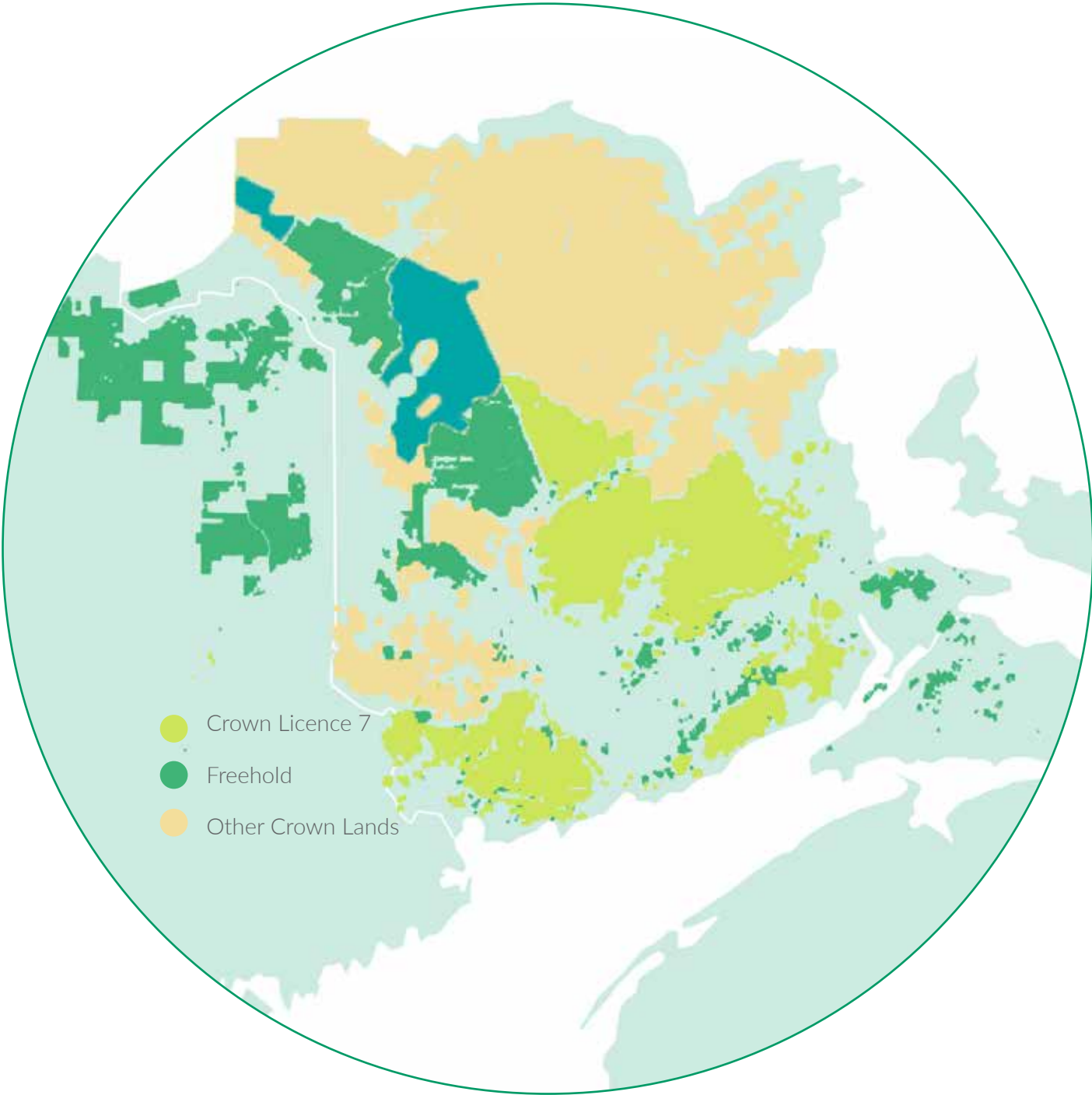
Endnotes and 2024 Restatements

ACADIAN FOREST



The forestry operations of J.D. Irving, Limited take place in the Acadian Forest, which is composed of the forests of New Brunswick, Nova Scotia and Maine. The Acadian Forest is characterized by its mix of softwood-dominant, hardwood-dominant and mixed stands.

FREEHOLD AND NEW BRUNSWICK CROWN LANDS



Freehold lands are privately held lands owned by J.D. Irving, Limited and its affiliates. Crown lands are owned by the Government of New Brunswick and are licenced to forest product companies for 25 years. Crown Licence 7 is managed by J.D. Irving, Limited.

Task Force On Climate-Related Financial Disclosure Reference Table

Alignment to the disclosure required by the TCFD is incorporated throughout the report. The table below references the disclosure required by the TCFD and where this information is located.

TCFD REFERENCE GUIDE

TCFD CATEGORY	Guidance	Report Section	Page
Governance	a. Describe the board’s oversight of climate-related risks and opportunities.	Sustainability Governance	95-96
	b. Describe management’s role in assessing and managing climate-related risks and opportunities.	Sustainability Governance	95-96
Strategy	a. Describe climate-related risks and opportunities the organization has identified over the short term, medium term and long term.	Climate Change & Adaptation GHG Emissions & Energy Use	68-71
	b. Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy and financial planning.	Climate Change & Adaptation GHG Emissions & Energy Use	68-71
	c. Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including at 2 °C or lower scenario.	Climate Change & Adaptation	59-60
Risk Management	a. Describe the organization’s processes for identifying and assessing climate related risks.	Sustainability Governance	96
	b. Describe the organization’s processes for managing climate related risks.	Sustainability Governance	96
	c. Describe how processes for identifying and managing climate-related risks are integrated into the organization’s overall risk management.	Sustainability Governance Climate Change & Adaptation	95-96
Metrics and Targets	a. Disclose the metrics used by the organization to assess climate-related risk and opportunity in line with its strategy and risk management process.	Data Tables: Environment – GHG Emissions Biogenic CO2 Emissions GHG Emission Intensity Energy Energy Intensity Water Water Intensity Trees Planted Forest Harvest & Growth Rates	115-117, 120-123, 125-128, 130-131
	b. Disclose Scope 1, Scope 2 and if appropriate Scope 3 greenhouse gas emissions and the related risks.	GHG Emissions & Energy Use: 2020-2022 GHG Emissions and Removals, GHG Intensity	62-66, 117-123
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	GHG Emissions & Energy Use: Reporting to the PAS2060:2014 Standard	66

GRI Content Index

J.D. Irving, Limited has reported the information cited in this Global Reporting Index (GRI) content index for the period from 1 January 2024 to 31 December 2024 with reference to the GRI Standards. This means that our reporting has referenced selected General Disclosures, as well as selected Topic-Specific Standards we have deemed material. In this GRI Context Index, we list our disclosures with reference to the applicable GRI Standards and the location within the report where the disclosures are addressed. The GRI 1 used for this report is GRI 1: Foundation 2021.

GRI STANDARD #	INDICATOR NAME	LOCATION (page)
GRI 2: GENERAL DISCLOSURES 2021		
The organization and its sustainability reporting practices		
GRI 2-1	Organizational details	8
GRI 2-2	Entities included in the organization’s sustainability reporting	8
GRI 2-3	Reporting period, frequency and contact point	9
GRI 2-4	Restatements of information	141
GRI 2-5	External assurance	10, 110-114
ACTIVITIES AND WORKERS		
GRI 2-6	Activities, value chain and other business relationships	8
GRI 2-7	Employees	90
GRI 2-8	Workers who are not employees	90
GOVERNANCE		
GRI 2-9	Governance structure and composition	95
GRI 2-11	Chair of the highest governing body	95-96
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	95-96
GRI 2-13	Delegation of responsibility for managing impacts	95-96
GRI 2-14	Role of the highest governance body in sustainability reporting	95-96
GRI 2-15	Conflicts of interest	90
GRI 2-16	Communication of critical concerns	96
STRATEGIES, POLICIES AND PRACTICES		
GRI 2-22	Statement on sustainable development strategy	9
GRI 2-25	Processes to remediate negative impacts	96
GRI 2-26	Mechanism for seeking advice and raising concerns	96
GRI 2-27	Compliance with laws and regulations	139
GRI 2-28	Membership associations	140
STAKEHOLDER ENGAGEMENT		
GRI 2-29	Approach to stakeholder engagement	97
GRI 2-30	Collective bargaining agreements	139
GRI 3: MATERIAL TOPICS 2021		
GRI 3-1	Process to determine material topics	97
GRI 3-2	List of material topics	97
GRI 3-3	Management of material topics	97, 99

GRI STANDARD #	INDICATOR NAME	LOCATION (page)
GRI 201: ECONOMIC PERFORMANCE 2016		
GRI 201-1	Direct economic value generated and distributed	132
GRI 201-2	Financial implications and other risks and opportunities due to climate change	59-60, 62-64, 68-71
GRI 201-3	Defined benefit plan obligation and other retirement plans	137-138
GRI 203: INDIRECT ECONOMIC IMPACTS 2016		
GRI 203-1	Infrastructure investments and services supported	132
GRI 203-2	Significant indirect economic impacts	132
GRI 204: PROCUREMENT PRACTICES 2016		
GRI 204-1	Proportion of spending on local suppliers	132
GRI 205: ANTI-CORRUPTION 2016		
GRI 205-2	Communication and training about anti-corruption policies and procedures	90-91
GRI 205-3	Confirmed incidents of corruption and actions taken	139
GRI 206: ANTI-COMPETITIVE BEHAVIOUR 2016		
GRI 206-1	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	139
GRI 301: MATERIALS 2016		
GRI 301-1	Materials used by weight or volume	129
GRI 301-2	Recycled input materials used	129-130
GRI 302: ENERGY 2016		
GRI 302-1	Energy consumption within the organization	120-122
GRI 302-3	Energy intensity	122-123
GRI 303: WATER AND EFFLUENTS 2016		
GRI 303-1	Interactions with water as a shared resource	50
GRI 303-2	Management of water discharge-related impacts	52-54
GRI 303-3	Water withdrawal	125
GRI 303-4	Water discharge	125-126
GRI 303-5	Water consumption	125, 127
GRI 304: BIODIVERSITY 2016		
GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	46
GRI 304-2	Significant impacts of activities, products and services on biodiversity	46
GRI 304-3	Habitats protected or restored	45, 130-131
GRI 304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	131
GRI 305: EMISSIONS 2016		
GRI 305-1	Direct (Scope 1) GHG emissions	62, 115
GRI 305-2	Energy indirect (Scope 2) GHG emissions	62, 115
GRI 305-3	Other indirect (Scope 3) GHG emissions	62, 115

GRI STANDARD #	INDICATOR NAME	LOCATION (page)
GRI 305-4	GHG emissions intensity	66,117
GRI 305-5	Reduction of GHG emissions	64
GRI 305-7	Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	51, 118
GRI 306: WASTE 2020		
GRI 306-3	Waste generated	123
GRI 306-4	Waste diverted from disposal	124
GRI 306-5	Waste directed to disposal	124
GRI 307: ENVIRONMENTAL COMPLIANCE 2016		
GRI 307-1	Non-compliance with environmental laws and regulations	119-120
GRI 401: EMPLOYMENT 2016		
GRI 401-1	New employee hires and employee turnover	132-133
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	137-139
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018		
GRI 403-1	Occupational health and safety management system	73-74
GRI 403-2	Hazard identification, risk assessment and incident investigation	74, 76
GRI 403-4	Worker participation, consultation and communication on occupational health and safety	77
GRI 403-5	Worker training on occupational health and safety	74-77
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked to business relationships	74-75
GRI 404: TRAINING AND EDUCATION 2016		
GRI 404-1	Average hours of training per year per employee	136
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	136
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016		
GRI 405-1	Diversity of governance bodies and employees	137
GRI 405-2	Ratio of basic salary and remuneration of women to men	137
GRI 413: LOCAL COMMUNITIES 2016		
GRI 413-1	Operations with local community engagement, impact assessments and development programs	80-87, 140
GRI 418: CUSTOMER PRIVACY 2016		
GRI 418-1	Substantial complaints concerning breaches of customer privacy and losses of customer data	139
GRI 419: SOCIOECONOMIC COMPLIANCE 2016		
GRI 419-1	Non-compliance with laws and regulations in the social and economic area	139

SASB	ACCOUNTING METRIC	LOCATION (page)
PULP & PAPER INDUSTRY		
GREENHOUSE GAS EMISSIONS		
RR-PP-110a.1	Gross global Scope 1 emissions	115
RR-PP-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets and an analysis of performance against those targets	62-71
AIR QUALITY		
RR-PP-120a.1	Air emissions of the following pollutants:	
	1) NOx (excluding N ₂ O)	118
	2) SO ₂	118
	3) volatile organic compounds	118
	4) particulate matter (PM)	118
ENERGY MANAGEMENT		
RR-PP-130a.1	1) total energy consumed	120
	2) percentage grid electricity	121
	3) percentage from biomass	121
	4) percentage from other renewable energy	122
WATER MANAGEMENT		
RR-PP-140a.1	1) total water withdrawn	125
	2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	125
RR-PP-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	52-55
SUPPLY CHAIN MANAGEMENT		
RR-PP-430a.1	Percentage of wood fibre sourced from:	
	1) third-party certified forestlands and percentage to each standard	130
	2) meeting other fibre sourcing standards and percentage to each standard	130
RR-PP-430a.2	Amount of recycled and recovered fibre procured	130
PULP & PAPER INDUSTRY ACTIVITY METRICS		
RR-PP-000.A	Pulp production	131
RR-PP-000.B	Paper production	131-132
RR-PP-000.C	Total wood fibre sourced	130

SASB	ACCOUNTING METRIC	LOCATION (page)
FORESTRY MANAGEMENT		
ECOSYSTEM SERVICES & IMPACTS		
RR-FM-160a.1	Area of forestland certified to a third-party forest management standard, percentage certified to each standard	130
RR-FM-160a.2	Area of forestland with protected conservation status	130-131
RR-FM-160a.3	Area of forestland in endangered species habitat	131
RR-FM-160a.4	Description of approach to optimizing opportunities from ecosystem services provided by forestlands	38, 44, 46
RIGHTS OF INDIGENOUS PEOPLES		
RR-FM-210a.2	Description of engagement processes and due diligence practices with respect to human rights, indigenous rights and the local community	80-87, 96-97
CLIMATE CHANGE ADAPTATION		
RR-FM-450a.1	Description of strategy to manage opportunities for and risks to forest management and timber production presented by climate change	58-60, 68-71
FORESTRY MANAGEMENT ACTIVITY METRICS		
RR-FM-000.A	Area of forestland owned, leased and/or managed by the entity	8, 130
RR-FM-000.B	Aggregate standing timber inventory	131
RR-FM-000.C	Timber harvest volume	131



E. Verification Statement

To J.D. Irving, Limited,

We have been engaged by J.D. Irving, Limited (the “Entity”) to examine certain performance indicator assertions (collectively, the “Assertions”) as presented in the 2024 J.D. Irving, Limited *Climate, Conservation and Community Impact Report* (the “Report”), for the period January 1, 2024 to December 31, 2024.

The agreed upon verification program established in accordance with ISO 17029 comprised of the the following:

Verification scope:	Defined in section D. Verification Details. Includes the 11 defined indicators and their respective criteria.
Competence Criteria for the verification team and KPMG PRI:	KPMG PRI requirements: Accreditation in relation to ISO 17029. Team requirements: 1 Professional Forester, 1 lead verifier under ISO 14065, 1 technical reviewer under ISO 14065. Sector competency coverage for the team shall include: 01. General; 02. Manufacturing; and 10. Agriculture, Forestry and Other Land Use Organizational Level Verification Categories, and: 03. Land use and forestry Project Level Verification Categories.
Verification Process:	Documented in detail in the verification plan in Appendix A of the long form verification report. In carrying out the verification, we: <ul style="list-style-type: none">• Evaluated the suitability of the Entity’s use of the applicable criteria, as the basis for preparing each indicator in the circumstances;• Through inquiries with relevant staff, obtained an understanding of the Entity’s control environment, processes and systems relevant to the preparation of each indicator, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;• Through inquiries with relevant staff, obtained an understanding of the data collection and reporting processes for each indicator;• Evaluated whether the Entity’s methods for developing estimates are appropriate and were consistently applied; however, our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate the Entity’s estimates;



	<ul style="list-style-type: none">• Inquired of management regarding key assumptions and, where relevant, compared to the assumptions used in calculations;• Reperformed calculations of the indicators;• Inspected a limited number of items to trace to supporting records, as appropriate; and,• Considered the presentation and disclosure of the indicators.
Reporting Requirements:	Long-form limited assurance verification report disclosing assurance process, JDI data, evidence reviewed and findings for each indicator. Types of findings include: Non-conformances, Opportunities for Improvement. Situations under which the report is required to be qualified: material unadjusted discrepancy in a specific indicator and identified non-conformance(s) with the applicable criteria; Material uncertainty (as a result of a restriction in PRI’s ability to collect assurance evidence) related to indicator data. Where discrepancies or non-conformances are indicative of a pervasive issue a “materially misstated” conclusion is appropriate. Where uncertainties in relation to indicator data are pervasive a “denial of conclusion is appropriate”.

The Assertions comprise the following indicators:

Indicator	Reported amounts and units	Page number in the Report	Applicable criteria
Net Forest Products Value Chain Emissions / (Removals)	(956,000) tCO ₂ e	Page 62	<ul style="list-style-type: none">• The World Resource Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard Revised Edition (2004);• GHG Protocol Scope 2 Guidance, An amendment to the GHG Protocol Corporate Standard (2015);• The Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011) as applicable to Scope 3 emission categories 1 to 8;• Carbon curves from The Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) supplemented by internally developed criteria for forest sequestration and emissions; and,



Indicator	Reported amounts and units	Page number in the Report	Applicable criteria
			<ul style="list-style-type: none">ISO 14068-1 in relation to the development of the Entity's carbon neutral statement.
Lands under Irving management	2,374,450 Ha	Page 28	Total area of freehold (private) land and government-owned Crown (public) land managed under license by J.D. Irving, Limited as at December 31, 2024.
Percentage of the forested landbase harvested	1.6 %	Page 24	Total area, in hectares, of forested land base harvested during the period of January 1 to December 31, 2024 divided by the total Lands under Irving Management.
Conservation forest area	554,069 Ha	Page 45	Total area of <i>Lands under Irving Management</i> which is maintained for the primary purpose of conservation as at December 31, 2024.
Percentage of conservation forest	25 %	Page 45	Total <i>conservation forest area</i> divided by the total productive forest area managed by Irving as at December 31, 2024.
Recordable incident rate	2.0 per 200,000 hours	Page 75	The total number of employee recordable injuries in the Forest Supply Chain based on the criteria of the United States Occupational Health Administration and provincial requirements for injury reporting as set out by the respective Workers' Compensation Boards and Regulators for injury recording that occurred during the period of January 1 to December 31, 2024 multiplied by 200,000 hours and divided by total hours worked during the same period. Contractors are not included.
Lost-time injury rate	1.0 per 200,000 hours	Page 75	The total number of employee lost-time injuries in the Forest Supply Chain based on the criteria of the United States Occupational Health Administration and provincial requirements for injury reporting as set out by the respective Workers' Compensation Boards and Regulators for injury recording that occurred during the period of January 1 to December 31, 2024 multiplied by 200,000 hours and divided by total hours worked during the same period. Contractors are not included.
Critical injury rate	0.23 per 200,000 hours	Page 75	The total number of employee critical injuries in the Forest Supply Chain based on the criteria of the United States Occupational Health Administration and provincial requirements for injury reporting as set out by the



Indicator	Reported amounts and units	Page number in the Report	Applicable criteria
			respective Workers' Compensation Boards and Regulators for injury recording that occurred during the period of January 1 to December 31, 2024 multiplied by 200,000 hours and divided by total hours worked during the same period. Contractors are not included.
Percentage of new employees in the Compliance Group who have signed the Code of Conduct	74.7 %	Page 90	<p>The number of employees in the <i>Compliance Group</i> hired during the period of January 1 to December 31, 2024 within the Forest Supply Chain who have signed the Code of Conduct divided by the total number of employees in the <i>Compliance Group</i> within the Forest Supply Chain hired during the same period.</p> <p>The Compliance Group is defined as: all employees whose position empowers them, or may reasonably be perceived as empowering them, to influence Company decisions.</p> <p>The Compliance Group includes management roles, professional roles, and includes the Company's salaried (non-hourly) workforce. It does not include employees whose employment is governed by a collective agreement.</p>
Community engagement (spend \$) - Donations	\$ 585,727	Page 82	Donations made to registered charities during the period of January 1 to December 31, 2024 by the Forest Supply Chain.
Community engagement (spend \$) - Scholarships	\$ 169,745	Page 82	<p>Total spend to support a students' post-secondary education during the period of January 1 to December 31 including:</p> <ul style="list-style-type: none">-scholarships to children of Forest Supply Chain employees, and,-scholarships paid from the Woodlands Division of the Forest Supply Chain to tree planters who complete the full tree-planting season.

The Entity is responsible for the preparation and fair presentation of the information within the Report in accordance with the Criteria.

Our responsibility is to express a conclusion as to whether anything has come to our attention to suggest that the Assertions are not presented fairly in accordance with the Criteria.



Our duties in relation to this report are owed solely to the report addressees. Accordingly, we do not accept any responsibility for any loss occasioned to any third party acting or refraining from action as a result of this report.

We completed our examination for the Net Forest Products Value Chain Emissions / (Removals) in accordance with ISO 14064-3:2019 *Specification with Guidance for the validation and verification of greenhouse gas assertions* and for all other sustainability indicators in accordance with ISO 17029:2019 *Conformity assessment – General principles and requirements for validation and verification bodies*. As such, we planned and performed our work to provide limited, rather than absolute assurance with respect to the Assertion. We believe our work provides a reasonable basis for our conclusion.

The extent of evidence gathering procedures performed in a limited assurance engagement is less than that for a reasonable assurance engagement, and therefore a lower level of assurance is obtained.

Based on our examination, nothing has come to our attention that causes us to believe that the Assertions presented in the Report are not, in all material respects, presented fairly in accordance with the Criteria.

Historical non-financial information, such as that contained in the Report, is subject to inherent limitations, given the characteristics of the underlying information and methods used for determining this information. A number of different measurement techniques may be utilized in accordance with the requirements of the verification criteria, which may vary in precision and/or outcome and can result in materially different measurements and can impact comparability. The nature and methods used to determine such information, as described in the Criteria, may change over time. It is important to read the Entity’s reporting methodology disclosed in the CCC Report.

KPMG PRI
July 2, 2025

DATA TABLES

Data	Measurement	2022	2023	2024	Endnote
ENVIRONMENT					
GREENHOUSE GAS EMISSIONS					
Scope 1 Emissions, Total	t CO ₂ e	553,157	516,296	495,015	a
by division					
Woodlands	t CO ₂ e	11,532	12,218	11,784	
Sawmills	t CO ₂ e	68,387	32,787	22,884	
Pulp and paper	t CO ₂ e	208,862	196,374	181,014	
Irving Pulp & Paper, Limited	t CO ₂ e	77,768	73,589	71,674	
Irving Paper Limited	t CO ₂ e	105,807	98,581	91,071	
Lake Utopia Paper Limited	t CO ₂ e	25,287	23,894	18,092	
Irving Personal Care	t CO ₂ e	77	134	98	
Irving Tissue	t CO ₂ e	264,300	274,784	279,235	
Scope 2 Emissions (location-based), Total	t CO ₂ e	662,719	551,078	634,769	a
by division					
Woodlands	t CO ₂ e	1,187	1,023	1,320	
Sawmills	t CO ₂ e	64,315	56,471	71,820	
Pulp and paper	t CO ₂ e	406,649	308,875	375,932	
Irving Pulp & Paper, Limited	t CO ₂ e	20,984	13,480	16,662	
Irving Paper Limited	t CO ₂ e	344,043	261,141	316,199	
Lake Utopia Paper Limited	t CO ₂ e	41,622	33,785	42,591	
Irving Personal Care	t CO ₂ e	4,788	3,402	5,230	
Irving Tissue	t CO ₂ e	185,781	181,307	180,467	
Scope 3 emissions, Total	t CO ₂ e	908,838	988,605	980,547	a
by division					
Woodlands	t CO ₂ e	139,110	149,316	146,271	
Sawmills	t CO ₂ e	132,913	124,113	129,006	
Pulp and paper	t CO ₂ e	223,571	338,829	300,038	
Irving Pulp & Paper, Limited	t CO ₂ e	71,901	116,958	107,364	
Irving Paper Limited	t CO ₂ e	117,663	182,019	150,868	
Lake Utopia Paper Limited	t CO ₂ e	33,424	39,133	41,109	
Irving Personal Care	t CO ₂ e	61,781	45,510	61,116	
Irving Tissue	t CO ₂ e	351,462	330,835	344,116	
Scope 1, 2 and 3 emissions, Total	t CO ₂ e	2,124,715	2,055,979	2,110,331	a
by division					
Woodlands	t CO ₂ e	151,829	162,557	159,375	
Sawmills	t CO ₂ e	265,615	213,371	223,710	
Pulp and paper	t CO ₂ e	839,082	844,079	856,984	
Irving Pulp & Paper, Limited	t CO ₂ e	170,654	204,027	195,700	

Data	Measurement	2022	2023	2024	Endnote
Irving Paper Limited	t CO ₂ e	567,513	541,741	558,138	a
Lake Utopia Paper Limited	t CO ₂ e	100,333	96,811	101,792	
Irving Personal Care	t CO ₂ e	66,646	49,046	66,444	
Irving Tissue	t CO ₂ e	801,543	786,926	803,818	
Scope 1 and 2 emissions, Total	t CO ₂ e	1,215,877	1,067,374	1,129,784	
by division					
Woodlands	t CO ₂ e	12,719	13,241	13,104	
Sawmills	t CO ₂ e	132,701	89,258	94,704	
Pulp and paper	t CO ₂ e	615,511	505,249	556,946	
Irving Pulp & Paper, Limited	t CO ₂ e	98,752	87,069	88,336	
Irving Paper Limited	t CO ₂ e	449,850	359,722	407,270	
Lake Utopia Paper Limited	t CO ₂ e	66,909	57,678	60,683	
Irving Personal Care	t CO ₂ e	4,865	3,535	5,328	
Irving Tissue	t CO ₂ e	450,081	456,091	459,702	
(REMOVAL)/EMISSION FROM HARVESTED WOOD PRODUCTS					
(Removal)/Emission from harvested wood products, Total	t CO ₂ e	(976,358)	(1,048,441)	(1,101,785)	
(Removal)/Emission from lumber	t CO ₂ e	(883,750)	(894,457)	(949,590)	
(Removal)/Emission from paper	t CO ₂ e	13,006	22,815	33,915	
(Removal)/Emission from pulp	t CO ₂ e	35,367	(54,362)	(64,195)	
(Removal)/Emission from tissue	t CO ₂ e	(144,119)	(117,416)	(113,584)	
(Removal)/Emission from corrugating medium	t CO ₂ e	3,138	(5,021)	(8,331)	
FOREST CARBON EMISSIONS AND (REMOVAL)					
(Removal)/Emission from freehold	t CO ₂ e	(2,364,100)	(1,822,800)	(1,969,224)	b,c
(Removal)/Emission from Crown Licence 7	t CO ₂ e	(2,547,400)	(2,351,800)	(2,135,589)	c
(Removal)/Emission from peat bog land use change	t CO ₂ e	0	3,727	3,766	d
NET CARBON FOOTPRINT					
Net carbon footprint	t CO ₂ e	(1,215,743)	(811,535)	(956,912)	b
BIOGENIC CO ₂ EMISSIONS					
Biogenic CO ₂ emissions, Total	t CO ₂ e	1,244,178	1,343,178	1,379,745	
by division					
Woodlands	t CO ₂ e	0	0	0	
Sawmills	t CO ₂ e	209,736	297,868	291,360	
Pulp and paper	t CO ₂ e	1,034,442	1,045,310	1,088,385	
Irving Pulp & Paper, Limited	t CO ₂ e	954,805	965,553	983,418	
Irving Paper Limited	t CO ₂ e	0	0	0	
Lake Utopia Paper Limited	t CO ₂ e	79,636	79,757	104,968	
Irving Personal Care	t CO ₂ e	0	0	0	
Irving Tissue	t CO ₂ e	0	0	0	

Data	Measurement	2022	2023	2024	Endnote
GREENHOUSE GAS EMISSIONS INTENSITY					
Scope 1 emissions intensity, Total	kg CO ₂ e / t product	48	41	37	
by division					
Woodlands	kg CO ₂ e / t product	2	2	2	
Sawmills	kg CO ₂ e / t product	15	7	4	
Pulp and paper	kg CO ₂ e / t product	234	219	205	
Irving Personal Care	kg CO ₂ e / t product	6	11	5	
Irving Tissue	kg CO ₂ e / t product	723	745	735	
Scope 2 emissions intensity, Total	kg CO ₂ e / t product	58	43	48	
by division					
Woodlands	kg CO ₂ e / t product	0	0	0	
Sawmills	kg CO ₂ e / t product	14	12	14	a
Pulp and paper	kg CO ₂ e / t product	456	344	426	
Irving Personal Care	kg CO ₂ e / t product	342	283	283	
Irving Tissue	kg CO ₂ e / t product	508	491	475	
Scope 3 emissions intensity, Total	kg CO ₂ e / t product	79	78	73	
by division					
Woodlands	kg CO ₂ e / t product	25	23	21	
Sawmills	kg CO ₂ e / t product	29	26	25	
Pulp and paper	kg CO ₂ e / t product	251	377	340	
Irving Personal Care	kg CO ₂ e / t product	4,415	3,785	3,312	
Irving Tissue	kg CO ₂ e / t product	962	897	905	
Scope 1 and 2 emissions intensity, Total	kg CO ₂ e / t product	106	84	85	
by division					
Woodlands	kg CO ₂ e / t product	2	2	2	a
Sawmills	kg CO ₂ e / t product	29	18	18	
Pulp and paper	kg CO ₂ e / t product	690	562	631	
Irving Personal Care	kg CO ₂ e / t product	348	294	289	
Irving Tissue	kg CO ₂ e / t product	1,232	1,236	1,209	
Scope 1, 2 and 3 emissions intensity, Total	kg CO ₂ e / t product	185	162	158	
by division					
Woodlands	kg CO ₂ e / t product	27	25	23	
Sawmills	kg CO ₂ e / t product	58	44	43	
Pulp and paper	kg CO ₂ e / t product	940	940	970	
Irving Personal Care	kg CO ₂ e / t product	4,763	4,079	3,600	
Irving Tissue	kg CO ₂ e / t product	2,193	2,133	2,115	

Data	Measurement	2022	2023	2024	Endnote
OTHER AIR EMISSIONS					
Nitrous oxide (NOx), Total	Tonnes	1,779	1,985	2,031	e
by division					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	288	375	370	
Pulp and paper	Tonnes	1,283	1,393	1,458	
Irving Pulp & Paper, Limited	Tonnes	927	1,031	1,098	
Irving Paper Limited	Tonnes	200	207	197	
Lake Utopia Paper Limited	Tonnes	157	155	162	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	208	216	203	
Sulphur dioxide (SOx), Total	Tonnes	1,623	1,218	962	
by division					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	457	218	85	
Pulp and paper	Tonnes	1,165	999	876	
Irving Pulp & Paper, Limited	Tonnes	491	457	404	
Irving Paper Limited	Tonnes	53	22	0	
Lake Utopia Paper Limited	Tonnes	620	520	471	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	1	1	1	
Particulate matter (PM), Total	Tonnes	1,928	2,140	2,253	
by division					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	1,786	1,951	2,038	
Pulp and paper	Tonnes	126	172	199	
Irving Pulp & Paper, Limited	Tonnes	99	145	168	
Irving Paper Limited	Tonnes	7	6	6	
Lake Utopia Paper Limited	Tonnes	20	20	25	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	16	17	16	
Volatile Organic Compounds (VOCs), Total	Tonnes	1,074	1,064	1,206	
by division					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	549	578	709	
Pulp and paper	Tonnes	301	296	290	
Irving Pulp & Paper, Limited	Tonnes	200	202	200	
Irving Paper Limited	Tonnes	46	46	44	
Lake Utopia Paper Limited	Tonnes	55	48	46	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	224	190	207	

Data	Measurement	2022	2023	2024	Endnote
ENVIRONMENTAL COMPLIANCE					
Odour complaints, Total	#	7	3	7	f
by division					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	7	3	7	
Irving Pulp & Paper, Limited	#	3	3	6	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	4	0	1	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
Environmental fines/convictions, Total	#	0	0	0	
by division					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	0	0	0	
Irving Pulp & Paper, Limited	#	0	0	0	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	0	0	0	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
BOD non-compliances, Total	#	0	0	23	
by division					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	0	0	23	
Irving Pulp & Paper, Limited	#	0	0	0	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	0	0	23	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
TSS non-compliances, Total	#	0	0	0	
by division					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	0	0	0	
Irving Pulp & Paper, Limited	#	0	0	0	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	0	0	0	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	

Data	Measurement	2022	2023	2024	Endnote
Trout toxicity failures, Total	#	1	5	4	
<i>by division</i>					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	1	5	4	
Irving Pulp & Paper, Limited	#	0	4	2	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	1	1	2	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
Water discharge non-compliances, Total	#	1	5	27	
<i>by division</i>					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	1	5	27	
Irving Pulp & Paper, Limited	#	0	4	2	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	1	1	25	f
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
ENERGY					
Direct and indirect energy consumption, Total	Gigajoules	32,319,497	34,296,243	34,319,985	
<i>by division</i>					
Woodlands	Gigajoules	184,518	196,004	190,198	
Sawmills	Gigajoules	4,172,716	4,819,615	4,695,694	
Pulp and paper	Gigajoules	19,810,697	20,445,302	20,528,486	
Irving Pulp & Paper, Limited	Gigajoules	11,896,896	12,664,917	12,936,796	
Irving Paper Limited	Gigajoules	5,957,346	5,805,059	5,587,253	
Lake Utopia Paper Limited	Gigajoules	1,954,374	1,963,758	1,996,155	
Irving Personal Care	Gigajoules	57,165	53,604	64,657	
Irving Tissue	Gigajoules	8,094,401	8,781,717	8,840,950	
Direct energy consumption, Total	Gigajoules	24,604,015	25,340,678	25,345,357	
<i>by division</i>					
Woodlands	Gigajoules	170,689	180,702	174,455	
Sawmills	Gigajoules	3,475,858	4,077,827	3,872,056	
Pulp and paper	Gigajoules	15,088,642	14,952,012	15,142,554	
Irving Pulp & Paper, Limited	Gigajoules	11,653,216	11,602,592	11,862,100	
Irving Paper Limited	Gigajoules	1,962,325	1,887,949	1,792,861	
Lake Utopia Paper Limited	Gigajoules	1,471,020	1,456,990	1,485,059	
Irving Personal Care	Gigajoules	1,562	2,581	1,885	
Irving Tissue	Gigajoules	5,867,264	6,127,556	6,154,408	

Data	Measurement	2022	2023	2024	Endnote
Direct energy consumption - biomass, Total	Gigajoules	13,994,754	15,149,652	15,524,840	
<i>by division</i>					
Woodlands	Gigajoules	0	0	0	
Sawmills	Gigajoules	2,591,133	3,680,329	3,599,356	
Pulp and paper	Gigajoules	11,403,621	11,469,323	11,925,484	
Irving Pulp & Paper, Limited	Gigajoules	10,349,247	10,404,666	10,714,300	
Irving Paper Limited	Gigajoules	0	0	0	
Lake Utopia Paper Limited	Gigajoules	1,054,374	1,064,657	1,211,184	
Irving Personal Care	Gigajoules	0	0	0	
Irving Tissue	Gigajoules	0	0	0	
Indirect energy consumption, Total	Gigajoules	7,715,482	8,955,564	8,974,628	
<i>by division</i>					
Woodlands	Gigajoules	13,829	15,303	15,744	
Sawmills	Gigajoules	696,858	741,788	823,638	
Pulp and paper	Gigajoules	4,722,055	5,493,290	5,385,933	
Irving Pulp & Paper, Limited	Gigajoules	243,680	1,062,325	1,074,696	
Irving Paper Limited	Gigajoules	3,995,021	3,917,110	3,794,392	
Lake Utopia Paper Limited	Gigajoules	483,354	506,768	511,096	
Irving Personal Care	Gigajoules	55,603	51,023	62,772	
Irving Tissue	Gigajoules	2,227,137	2,654,161	2,686,541	
Electrical energy produced on site, Total	Gigajoules	1,151,868	1,321,312	1,369,303	
<i>by division</i>					
Woodlands	Gigajoules	0	0	0	
Sawmills	Gigajoules	9,025	13,041	44,870	
Pulp and paper	Gigajoules	739,218	860,127	873,117	
Irving Pulp & Paper, Limited	Gigajoules	739,218	860,127	873,117	
Irving Paper Limited	Gigajoules	0	0	0	
Lake Utopia Paper Limited	Gigajoules	0	0	0	
Irving Personal Care	Gigajoules	0	0	0	
Irving Tissue	Gigajoules	403,625	448,144	451,316	
Percentage of energy from electric grid, Total	%	23.9	22.3	22.2	
<i>by division</i>					
Woodlands	%	7.5	7.8	8.3	
Sawmills	%	16.7	15.1	16.6	
Pulp and paper	%	23.9	22.7	22.0	
Irving Pulp & Paper, Limited	%	2.1	1.6	1.6	
Irving Paper Limited	%	67.1	67.5	67.9	
Lake Utopia Paper Limited	%	24.7	25.8	25.6	
Irving Personal Care	%	97.3	95.2	97.1	
Irving Tissue	%	27.5	25.1	25.3	

Data	Measurement	2022	2023	2024	Endnote
Percentage of energy from renewable sources, Total	%	55.8	57.9	59.2	
<i>by division</i>					
Woodlands	%	2.3	2.5	2.4	
Sawmills	%	67.9	81.4	82.7	
Pulp and paper	%	64.9	66.9	69.6	
Irving Pulp & Paper, Limited	%	88.0	88.7	89.4	
Irving Paper Limited	%	20.1	21.1	19.6	
Lake Utopia Paper Limited	%	61.0	62.0	82.0	
Irving Personal Care	%	29.5	29.8	28.0	
Irving Tissue Saint John Mill	%	50.8	31.3	28.8	
Percentage of energy from own electrical generation, Total	%	3.6	3.9	4.0	
<i>by division</i>					
Woodlands	%	0.0	0.0	0.0	
Sawmills	%	0.2	0.3	1.0	
Pulp and paper	%	3.7	4.2	4.3	
Irving Pulp & Paper, Limited	%	6.2	6.8	6.7	
Irving Paper Limited	%	0.0	0.0	0.0	
Lake Utopia Paper Limited	%	0.0	0.0	0.0	
Irving Personal Care	%	0.0	0.0	0.0	
Irving Tissue Saint John Mill	%	0.0	0.0	0.0	
ENERGY INTENSITY					
Direct energy consumption intensity, Total					
<i>by division</i>					
Woodlands	Gigajoules / t product	0.0	0.0	0.0	
Sawmills	Gigajoules / t product	0.8	0.8	0.7	
Pulp and paper	Gigajoules / t product	16.9	16.6	17.1	
Irving Personal Care	Gigajoules / t product	0.1	0.2	0.1	
Irving Tissue	Gigajoules / t product	16.8	16.8	16.4	
Indirect energy consumption intensity, Total					
<i>by division</i>					
Woodlands	Gigajoules / t product	0.0	0.0	0.0	
Sawmills	Gigajoules / t product	0.2	0.2	0.2	
Pulp and paper	Gigajoules / t product	5.3	6.1	6.1	
Irving Personal Care	Gigajoules / t product	4.0	4.2	3.4	
Irving Tissue	Gigajoules / t product	6.4	7.3	7.2	

Data	Measurement	2022	2023	2024	Endnote
Direct and indirect energy consumption intensity, Total					
<i>by division</i>					
Woodlands	Gigajoules / t product	0.0	0.0	0.0	
Sawmills	Gigajoules / t product	0.9	1.0	0.9	
Pulp and paper	Gigajoules / t product	22.2	22.8	23.2	
Irving Personal Care	Gigajoules / t product	4.1	4.5	3.5	
Irving Tissue	Gigajoules / t product	23.1	24.0	23.6	
WASTE					
Weight of waste generated, Total	Tonnes	279,831	321,985	275,927	
<i>by division</i>					
Woodlands	Tonnes	0.0	0.0	0.0	
Sawmills	Tonnes	132,154	168,771	90,747	
Pulp and paper	Tonnes	119,104	119,021	147,233	
Irving Pulp & Paper, Limited	Tonnes	25,369	25,843	56,510	g
Irving Paper Limited	Tonnes	55,626	55,095	51,757	
Lake Utopia Paper Limited	Tonnes	38,109	38,083	38,966	
Irving Personal Care	Tonnes	791	571	891	
Irving Tissue	Tonnes	27,782	33,622	37,057	
Hazardous waste generated, Total	Tonnes	821	335	97	
<i>by division</i>					
Woodlands	Tonnes	0.0	0.0	0.0	
Sawmills	Tonnes	59	49	36	
Pulp and paper	Tonnes	161	22	0.0	
Irving Pulp & Paper, Limited	Tonnes	161	19	0.0	
Irving Paper Limited	Tonnes	0.0	3	0.0	
Lake Utopia Paper Limited	Tonnes	0.0	0.0	0.0	
Irving Personal Care	Tonnes	0.0	0.0	0.0	
Irving Tissue	Tonnes	439	244	61	
Non-hazardous waste generated, Total	Tonnes	279,172	321,669	275,830	
<i>by division</i>					
Woodlands	Tonnes	0.0	0.0	0.0	
Sawmills	Tonnes	132,095	168,722	90,711	
Pulp and paper	Tonnes	118,942	118,998	147,233	
Irving Pulp & Paper, Limited	Tonnes	25,207	25,824	56,510	g
Irving Paper Limited	Tonnes	55,626	55,092	51,757	
Lake Utopia Paper Limited	Tonnes	38,109	38,083	38,966	
Irving Personal Care	Tonnes	791	571	891	
Irving Tissue	Tonnes	27,344	33,378	36,996	

Data	Measurement	2022	2023	2024	Endnote
Weight of waste sent to landfill, Total	Tonnes	104,239	140,387	81,641	g
<i>by division</i>					
Woodlands	Tonnes	0.0	0.0	0.0	
Sawmills	Tonnes	93,773	128,925	70,197	
Pulp and paper	Tonnes	4,056	5,960	5,375	
Irving Pulp & Paper, Limited	Tonnes	1,041	2,463	1,777	
Irving Paper Limited	Tonnes	427	424	430	
Lake Utopia Paper Limited	Tonnes	2,587	3,073	3,168	
Irving Personal Care	Tonnes	545	389	570	
Irving Tissue	Tonnes	5,866	5,113	5,498	
Weight of waste diverted from disposal, Total	Tonnes	174,933	181,282	194,189	
<i>by division</i>					
Woodlands	Tonnes	0.0	0.0	0.0	
Sawmills	Tonnes	38,322	39,796	20,514	
Pulp and paper	Tonnes	114,887	113,039	141,858	
Irving Pulp & Paper, Limited	Tonnes	24,166	23,361	54,733	
Irving Paper Limited	Tonnes	55,199	54,668	51,327	
Lake Utopia Paper Limited	Tonnes	35,522	35,010	35,798	
Irving Personal Care	Tonnes	246	182	320	
Irving Tissue	Tonnes	21,478	28,265	31,498	
Percentage of non-hazardous sent to landfill, Total	%	37.3	43.6	29.6	
<i>by division</i>					
Woodlands	%	0.0	0.0	0.0	
Sawmills	%	71.0	76.4	77.4	
Pulp and paper	%	3.4	5.0	3.7	
Irving Pulp & Paper, Limited	%	4.1	9.5	3.1	
Irving Paper Limited	%	0.8	0.8	0.8	
Lake Utopia Paper Limited	%	6.8	8.1	8.1	
Irving Personal Care	%	68.8	68.1	64.0	
Irving Tissue	%	21.5	15.3	14.9	

Data	Measurement	2022	2023	2024	Endnote
Percentage of non-hazardous waste diverted from disposal, Total	%	62.7	56.4	70.4	
by division					
Woodlands	%	0.0	0.0	0.0	
Sawmills	%	29.0	23.6	22.6	
Pulp and paper	%	96.6	95.0	96.3	
Irving Pulp & Paper, Limited	%	95.9	90.5	96.9	
Irving Paper Limited	%	99.2	99.2	99.2	
Lake Utopia Paper Limited	%	93.2	91.9	91.9	
Irving Personal Care	%	31.2	31.9	36.0	
Irving Tissue	%	78.5	84.7	85.1	
WASTE INTENSITY					
Waste weight intensity Total					
by division					
Woodlands	kgs / t product	0.0	0.0	0.0	
Sawmills	kgs / t product	28.6	34.9	17.3	
Pulp and paper	kgs / t product	133.5	132.5	166.7	
Irving Personal Care	kgs / t product	56.5	47.5	48.3	
Irving Tissue	kgs / t product	79.5	91.9	98.9	
WATER					
Water withdrawn, surface water, Total	Thousand m³	65,610	64,057	69,028	h
Water consumption, Total	Thousand m³	65,610	64,057	69,028	h
by division					h
Woodlands	Thousand m³	0	0	0	
Sawmills	Thousand m³	0	0	0	
Pulp and paper	Thousand m³	53,074	52,127	57,766	
Irving Pulp & Paper, Limited	Thousand m³	33,748	33,281	38,930	
Irving Paper Limited	Thousand m³	12,402	12,354	12,192	
Lake Utopia Paper Limited	Thousand m³	6,924	6,493	6,644	
Irving Personal Care	Thousand m³	0	0	0	
Irving Tissue	Thousand m³	12,536	11,930	11,262	
Water discharge, Total	Thousand m³	69,369	67,894	65,312	
by division					
Woodlands	Thousand m³	0	0	0	
Sawmills	Thousand m³	0	0	0	
Pulp and paper	Thousand m³	57,675	56,661	59,865	
Irving Pulp & Paper, Limited	Thousand m³	38,453	38,012	41,851	
Irving Paper Limited	Thousand m³	12,010	11,886	11,635	
Lake Utopia Paper Limited	Thousand m³	7,213	6,763	6,379	
Irving Personal Care	Thousand m³	0	0	0	
Irving Tissue	Thousand m³	11,694	11,233	5,447	

Data	Measurement	2022	2023	2024	Endnote
Percent of product that is elemental chlorine-free	%	100%	100%	100%	
<i>by division</i>					
Pulp and paper	%	100%	100%	100%	
Irving Tissue	%	100%	100%	100%	
Water discharges BOD, Total	Tonnes	3,856	3,677	3,526	
<i>by division</i>					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	0	0	0	
Pulp and paper	Tonnes	2,942	2,953	2,763	
Irving Pulp & Paper, Limited	Tonnes	1,959	2,139	1,926	
Irving Paper Limited	Tonnes	689	671	562	
Lake Utopia Paper Limited	Tonnes	295	142	275	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	914	725	763	
Water discharges COD, Total	Tonnes	22,806	22,571	22,101	
<i>by division</i>					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	0	0	0	
Pulp and paper	Tonnes	21,747	21,567	21,093	
Irving Pulp & Paper, Limited	Tonnes	8,774	10,081	10,130	
Irving Paper Limited	Tonnes	2,338	2,248	2,116	
Lake Utopia Paper Limited	Tonnes	10,635	9,238	8,847	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	1,058	1,004	1,008	
Water discharges TSS, Total	Tonnes	7,312	7,047	6,715	
<i>by division</i>					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	0	0	0	
Pulp and paper	Tonnes	5,804	5,570	5,340	
Irving Pulp & Paper, Limited	Tonnes	2,175	2,049	1,963	
Irving Paper Limited	Tonnes	3,251	3,234	2,994	
Lake Utopia Paper Limited	Tonnes	378	287	383	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	1,508	1,477	1,375	

Data	Measurement	2022	2023	2024	Endnote
AOX emissions, Total	Kg	53,880	65,387	94,429	
<i>by division</i>					
Woodlands	Kg	0	0	0	
Sawmills	Kg	0	0	0	
Pulp and paper	Kg	53,880	65,387	94,429	i
Irving Pulp & Paper, Limited	Kg	53,880	65,387	94,429	i
Irving Paper Limited	Kg	0	0	0	
Lake Utopia Paper Limited	Kg	0	0	0	
Irving Personal Care	Kg	0	0	0	
Irving Tissue	Kg	0	0	0	
Significant spills, Total	#	0	2	3	
<i>by division</i>					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	0	2	3	
Irving Pulp & Paper, Limited	#	0	2	1	
Irving Paper Limited	#	0	0	2	
Lake Utopia Paper Limited	#	0	0	0	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	0	0	0	
WATER INTENSITY					
Water consumption intensity, Total					
<i>by division</i>					
Woodlands	m³/t product	0	0	0	
Sawmills	m³/t product	0	0	0	
Pulp and paper	m³/t product	60	58	65	
Irving Pulp & Paper, Limited	m³/t product	105	102	120	
Irving Paper Limited	m³/t product	31	32	33	
Lake Utopia Paper Limited	m³/t product	39	36	36	
Irving Personal Care	m³/t product	0	0	0	
Irving Tissue	m³/t product	36	33	30	
Water discharge intensity, Total					
<i>by division</i>					
Woodlands	m³/t product	0	0	0	
Sawmills	m³/t product	0	0	0	
Pulp and paper	m³/t product	65	63	68	
Irving Pulp & Paper, Limited	m³/t product	120	117	129	
Irving Paper Limited	m³/t product	30	31	31	
Lake Utopia Paper Limited	m³/t product	41	37	35	
Irving Personal Care	m³/t product	0	0	0	
Irving Tissue	m³/t product	34	31	15	

Data	Measurement	2022	2023	2024	Endnote	
Water discharges BOD intensity, Total						
by division						
Woodlands	kg/t product	0	0	0		
Sawmills	kg/t product	0	0	0		
Pulp and paper	kg/t product	3	3	3		
Irving Pulp & Paper, Limited	kg/t product	6	7	6		
Irving Paper Limited	kg/t product	2	2	2		
Lake Utopia Paper Limited	kg/t product	2	1	1		
Irving Personal Care	kg/t product	0	0	0		
Irving Tissue	kg/t product	3	2	2		
Water discharges COD intensity, Total						
by division						
Woodlands	kg/t product	0	0	0		
Sawmills	kg/t product	0	0	0		
Pulp and paper	kg/t product	24	24	24		
Irving Pulp & Paper, Limited	kg/t product	27	31	31		
Irving Paper Limited	kg/t product	6	6	6		
Lake Utopia Paper Limited	kg/t product	61	51	48		
Irving Personal Care	kg/t product	0	0	0		
Irving Tissue	kg/t product	3	3	3		
Water discharges TSS intensity, Total						
by division						
Woodlands	kg/t product	0	0	0		
Sawmills	kg/t product	0	0	0		
Pulp and paper	kg/t product	7	6	6		
Irving Pulp & Paper, Limited	kg/t product	7	6	6		
Irving Paper Limited	kg/t product	8	8	8		
Lake Utopia Paper Limited	kg/t product	2	2	2		
Irving Personal Care	kg/t product	0	0	0		
Irving Tissue	kg/t product	4	4	4		
AOX emissions intensity, Total						
by division						
Woodlands	g/t product	0	0	0		
Sawmills	g/t product	0	0	0		
Pulp and paper	g/t product	60	73	107		
Irving Pulp & Paper, Limited	g/t product	168	201	292		
Irving Paper Limited	g/t product	0	0	0		
Lake Utopia Paper Limited	g/t product	0	0	0		
Irving Personal Care	g/t product	0	0	0		
Irving Tissue	g/t product	0	0	0		

Data	Measurement	2022	2023	2024	Endnote
MATERIAL					
Volume of input materials, Total	Tonnes	6,471,238	6,751,061	7,182,819	
by division					
Sawmills	Tonnes	4,623,411	4,894,514	5,317,966	
Pulp and paper	Tonnes	1,377,436	1,389,999	1,374,575	
Irving Pulp & Paper, Limited	Tonnes	715,734	736,856	737,017	
Irving Paper Limited	Tonnes	455,170	437,644	420,687	
Lake Utopia Paper Limited	Tonnes	206,532	215,499	216,871	
Irving Personal Care	Tonnes	13,993	12,024	18,455	
Irving Tissue	Tonnes	456,398	454,524	471,823	
Volume of input materials intensity, Total	T materials/T product	0.6	0.5	0.5	
by division					
Sawmills	T materials/T product	1.0	1.0	1.0	
Pulp and paper	T materials/T product	1.5	1.5	1.6	
Irving Pulp & Paper, Limited	T materials/T product	2.2	2.3	2.3	
Irving Paper Limited	T materials/T product	1.1	1.1	1.1	
Lake Utopia Paper Limited	T materials/T product	1.2	1.2	1.2	
Irving Personal Care	T materials/T product	1.0	1.0	1.0	
Irving Tissue	T materials/T product	1.2	1.2	1.2	
Volume of recycled input materials, Total	Tonnes	51,735	57,129	61,699	
by division					
Woodlands	Tonnes	0	0	0	
Sawmills	Tonnes	0	0	0	
Pulp and paper	Tonnes	51,735	57,129	61,699	
Irving Pulp & Paper, Limited	Tonnes	0	0	0	
Irving Paper Limited	Tonnes	0	0	0	
Lake Utopia Paper Limited	Tonnes	51,735	57,129	61,699	
Irving Personal Care	Tonnes	0	0	0	
Irving Tissue	Tonnes	0	0	0	

Data	Measurement	2022	2023	2024	Endnote
Product with at least 25% post-consumer recycled content, Total					
<i>by division</i>					
Woodlands	%	0	0	0	
Sawmills	%	0	0	0	
Pulp and paper	%	0	0	0	
Irving Pulp & Paper, Limited	%	0	0	0	
Irving Paper Limited	%	0	0	0	
Lake Utopia Paper Limited	%	64	62	61	
Irving Personal Care	%	0	0	0	
Irving Tissue	%	0	0	0	
Wood fiber sourced and harvested					
Wood fiber harvested & procured, Total	Tonnes	5,612,930	6,556,294	6,809,265	
Trees planted	# of Seedlings	18,754,777	17,813,981	18,517,590	
Recycled input materials/fibre procured	tonnes	51,735	57,129	61,699	
LAND CERTIFICATIONS					
Percentage of resource holdings SFI® certified	%	100	100	100	
Percentage of resource holdings under ISO®14001 Environmental Management System	%	100	100	100	
Percentage of resource holdings FSC® certified	%	20	20	20	
BIODIVERSITY CONSERVATION					
Land under Irving management, Total	Hectares	2,377,640	2,376,627	2,374,450	
Area of freehold land, Total	Hectares	1,315,303	1,315,204	1,313,160	
Area of JDI freehold land CAN, Total	Hectares	796,095	795,929	795,915	
Area of JDI freehold land US, Total	Hectares	519,208	519,275	517,245	
Area of JDI freehold land, Productive	Hectares	1,142,185	1,142,099	1,231,702	
Area of Crown land, Total	Hectares	1,062,337	1,061,423	1,061,290	
Area of Crown land, Productive	Hectares	952,851	952,031	950,667	
Conservation areas on JDI land	Hectares	247,913	249,811	269,969	
% Conservation area on JDI land, Productive	%	22	22	22	
Conservation areas on Crown land	Hectares	281,339	284,100	284,100	
% Conservation area on Crown land, Productive	%	30	30	30	

Data	Measurement	2022	2023	2024	Endnote
Total conservation area managed	Hectares	529,252	533,911	554,069	
% Conservation area managed, Productive	%	25	25	25	
Total unique areas managed	# of unique areas	2,001	2,149	2,419	
Number of species at risk within operational areas	#	36	38	38	
SILVICULTURE AND OTHER FORESTRY METRICS					
% Area Harvested of total lands under management	%	1.4	1.5	1.6	
Average Harvest Opening Size Freehold	Hectares	16	15	16	
Average Harvest Opening Size Crown	Hectares	20	23	22	
Actual Harvest Level Freehold	m3/ha	2.2	2.2	2.2	
Actual Harvest Level Crown	m3/ha	1.6	1.6	1.6	
Sustainable Harvest Level Freehold	m3/ha	2.4	2.5	2.4	
Sustainable Harvest Level Crown	m3/ha	2.1	2.1	2.1	
Area Deforested Per Year	%/yr	0.0	0.0	0.0	
Number of regulatory watercourse crossing violations	#	0.0	0.0	0.0	
Internal non-conformances (less safety and public complaints)	#	261	223	214	
DNR non-conformances	#	0.0	0.0	0.0	
FSC® non-conformances	#	0.0	0.0	0.0	
SFI® non-conformances	#	0.0	0.0	0.0	
SOCIAL					
PRODUCTION					
Production, Total	Tonnes	11,505,905	12,676,836	13,350,467	
<i>by division</i>					
Woodlands	Tonnes	5,612,930	6,556,294	6,809,265	
Woodlands harvested	Tonnes	4,329,590	5,032,279	5,038,606	
Woodlands purchased	Tonnes	1,283,340	1,524,015	1,770,659	
Sawmills	Tonnes	4,621,070	4,841,112	5,259,541	
Sawmills, Lumber	Tonnes	1,388,040	1,432,190	1,535,026	
Sawmills, Lumber	MFBM	1,064,677	1,102,568	1,180,612	
Sawmills, Residuals	Tonnes	3,072,946	3,226,957	3,473,504	
Sawmills, Pellets	Tonnes	138,850	176,186	237,369	
Sawmills, Peat moss and soils production	Tonnes	21,234	5,779	13,642	
Pulp and paper	Tonnes	892,478	898,399	883,101	
Irving Pulp & Paper, Limited	Tonnes	320,328	326,050	323,902	
Irving Paper Limited	Tonnes	396,564	389,623	374,655	
Lake Utopia Paper	Tonnes	175,586	182,726	184,544	
Irving Personal Care	Tonnes	13,993	12,024	18,455	

Data	Measurement	2022	2023	2024	Endnote
Irving Tissue - Converted	tonnes	365,435	369,007	380,105	
Irving Tissue - Paper	tonnes	349,579	365,815	374,707	
ECONOMIC PERFORMANCE					
Capital investment, USD, Total	\$ millions USD	270	269	316	
<i>by division</i>					
Woodlands	\$ millions USD	41	40	34	
Sawmills	\$ millions USD	80	53	39	
Pulp and Paper	\$ millions USD	121	152	229	
Irving Tissue & Irving Personal Care	\$ millions USD	24	23	11	
Head Office	\$ millions USD	2	2	3	
Spend on local suppliers, USD, Total	\$ millions USD	1,667	1,649	1,526	
<i>by division</i>					
Woodlands	\$ millions USD	389	431	463	
Sawmills	\$ millions USD	342	287	250	
Pulp and Paper	\$ millions USD	424	415	661	
Irving Tissue & Irving Personal Care	\$ millions USD	481	478	70	
Head Office	\$ millions USD	32	39	82	
EMPLOYMENT					
Full-time equivalent employees, Total	FTE	4,849	5,435	5,146	
<i>by division</i>					
Woodlands	FTE	554	783	682	
Sawmills	FTE	1,657	1,847	1,766	
Pulp and paper	FTE	924	1,011	991	
Irving Personal Care	FTE	155	155	131	
Irving Tissue	FTE	1,559	1,639	1,576	
Permanent employees by gender, Total	#	4,781	4,931	5,092	
Number of female permanent employees, Total	#	659	680	687	
Number of male permanent employees, Total	#	3,968	4,085	4,260	
Number of permanent employees with an unspecified gender, Total	#	154	166	145	
Temporary employees by gender, Total	#	30	215	207	
Temporary employees, Female	#	4	47	45	
Temporary employees, Male	#	25	150	142	
Temporary employees, Gender unspecified	#	1	18	20	
<i>by region</i>					
Permanent employees, CAN	#	3,614	3,750	3,839	
Temporary employees, CAN	#	28	199	190	
Permanent employees, US	#	1,166	1,178	1,250	
Temporary employees, US	#	2	15	16	

Data	Measurement	2022	2023	2024	Endnote
Full-time employees by gender, Total	#	4,767	5,069	5,217	
Number of female full-time employees, Total	#	656	714	715	
Number of male full-time employees, Total	#	3,957	4,172	4,338	
Number of full-time employees with an unspecified gender, Total	#	154	183	164	
Part-time employees by gender, Total	#	44	77	78	
Number of female part-time employees, Total	#	7	13	13	
Number of male part-time employees, Total	#	36	63	65	
Number of part-time employees with an unspecified gender, Total	#	1	1	0	
Employee engagement, Total	%	80	79	81	
<i>by division</i>					
Woodlands	%	86	85	86	
Sawmills	%	80	79	79	
Pulp and paper	%	75	69	75	
Irving Pulp & Paper, Limited	%	68	60	66	
Irving Paper Limited	%	78	67	78	
Lake Utopia Paper Limited	%	75	74	72	
Irving Forest Services	%	89	91	88	
Irving Personal Care	%	83	68	84	
Irving Tissue	%	82	82	84	
Total number of new employee hires	#	1,252	1,195	1,074	
Total rate of new employee hires	%	26	23	20	
Total employee turnover number	#	943	952	912	
Total employee turnover rate	%	20	19	17	

Data	Measurement	2022	2023	2024	Endnote
OCCUPATIONAL HEALTH & SAFETY					
Number of fatalities that occurred in a location, Total	#	0	0	0	
by division					
Woodlands	#	0	0	0	
Sawmills	#	0	0	0	
Pulp and paper	#	0	0	0	
Irving Pulp & Paper, Limited	#	0	0	0	
Irving Paper Limited	#	0	0	0	
Lake Utopia Paper Limited	#	0	0	0	
Irving Forest Services	#	0	0	0	
Irving Personal Care		0	0	0	
Irving Tissue	#	0	0	0	
Head Office	#	0	0	0	
Plant Sites	#	0	0	0	
Number of critical injuries that occurred in a location, Total	#	5	7	13	
by division					
Woodlands	#	0	2	0	
Sawmills	#	3	2	7	
Pulp and paper	#	0	2	1	
Irving Pulp & Paper, Limited	#	0	1	0	
Irving Paper Limited	#	0	1	1	
Lake Utopia Paper Limited	#	0	0	0	
Irving Forest Services	#	0	0	0	
Irving Personal Care	#	0	0	0	
Irving Tissue	#	2	1	5	
Head Office	#	0	0	0	
Plant Sites	#	2	1	5	
Rate of critical injuries that occurred in a location, Total	Rate	0.13	0.10	0.23	
by division					
Woodlands	Rate	0.00	0.24	0.00	
Sawmills	Rate	0.16	0.10	0.34	
Pulp and paper	Rate	0.00	0.20	0.10	
Irving Pulp & Paper, Limited	Rate	0.00	0.25	0.00	
Irving Paper Limited	Rate	0.00	0.31	0.31	
Lake Utopia Paper Limited	Rate	0.00	0.00	0.00	
Irving Forest Services	Rate	0.00	0.00	0.00	
Irving Personal Care	Rate	0.00	0.00	0.00	
Irving Tissue	Rate	0.13	0.06	0.30	
Head Office	Rate	0.00	0.00	0.00	
Plant Sites	Rate	0.14	0.07	0.35	

Data	Measurement	2022	2023	2024	Endnote
Number of recordable injuries that occurred in a location, Total	#	107	107	114	
by division					
Woodlands	#	9	23	15	
Sawmills	#	59	41	57	
Pulp and paper	#	12	17	13	
Irving Pulp & Paper, Limited	#	4	6	6	
Irving Paper Limited	#	7	9	5	
Lake Utopia Paper Limited	#	1	2	2	
Irving Forest Services	#	0	0	0	
Irving Personal Care	#	1	3	2	
Irving Tissue	#	26	23	27	
Head Office	#	1	0	0	
Plant Sites	#	25	23	27	
Rate of recordable injuries that occurred in a location, Total	Rate	2.0	1.9	2.0	
by division					
Woodlands	Rate	1.2	2.7	1.7	
Sawmills	Rate	3.2	2.1	2.8	
Pulp and paper	Rate	1.2	1.7	1.3	
Irving Pulp & Paper, Limited	Rate	1.0	1.5	1.5	
Irving Paper Limited	Rate	2.2	2.8	1.6	
Lake Utopia Paper Limited	Rate	0.7	1.3	1.3	
Irving Forest Services	Rate	0.0	0.0	0.0	
Irving Personal Care	Rate	0.6	1.8	1.2	
Irving Tissue	Rate	1.6	1.4	1.6	
Head Office	Rate	0.5	0.0	0.0	
Plant Sites	Rate	1.8	1.6	1.9	
Number of lost time injuries that occurred in a location (students are included), Total	#	36	47	57	
by division					
Woodlands	#	3	13	8	
Sawmills	#	26	19	31	
Pulp and paper	#	4	9	7	
Irving Pulp & Paper, Limited	#	2	3	3	
Irving Paper Limited	#	2	5	3	
Lake Utopia Paper Limited	#	0	1	1	
Irving Forest Services	#	0	0	0	
Irving Personal Care	#	1	2	1	
Irving Tissue	#	2	4	10	
Head Office	#	1	0	0	
Plant Sites	#	1	4	10	

Data	Measurement	2022	2023	2024	Endnote
Rate of lost time injuries that occurred in a location (students are included), Totals	Rate	0.7	0.8	1.0	
<i>by division</i>					
Woodlands	Rate	0.4	1.5	0.9	
Sawmills	Rate	1.4	1.0	1.5	
Pulp and paper	Rate	0.4	0.9	0.7	
Irving Pulp & Paper, Limited	Rate	0.5	0.7	0.7	
Irving Paper Limited	Rate	0.6	1.5	0.9	
Lake Utopia Paper Limited	Rate	0.0	0.7	0.7	
Irving Forest Services	Rate	0.0	0.0	0.0	
Irving Personal Care	Rate	0.6	1.2	0.6	
Irving Tissue	Rate	0.1	0.2	0.6	
Head Office	Rate	0.5	0.0	0.0	
Plant Sites	Rate	0.0	0.3	0.7	
Average percentage of employees reporting a hazard ID in a financial period, Total	Rate	54.9	42.5	45.7	
<i>by division</i>					
Woodlands	Rate	93.3	58.9	65.2	
Sawmills	Rate	100.0	81.0	82.2	
Pulp and paper	Rate	6.9	6.1	7.1	
Irving Pulp & Paper, Limited	Rate	6.5	6.5	7.4	
Irving Paper Limited	Rate	1.5	2.5	3.7	
Lake Utopia Paper Limited	Rate	17.9	11.9	14.8	
Irving Forest Services	Rate	8.5	7.1	5.9	
Irving Personal Care	Rate	21.8	18.5	14.3	
Irving Tissue	Rate	25.1	15.7	20.0	
Head Office	Rate	0	0.2	0.2	
Plant Sites	Rate	29.7	18.5	25.0	
TRAINING AND EDUCATION					
Number of employees participating in the leadership development training	#	789	829	743	
Hours of leadership development training	hours	6,681	11,524	15,437	
Spend on leadership development training	\$ CAD	328,200	811,441	1,068,460	

Data	Measurement	2022	2023	2024	Endnote
DIVERSITY & INCLUSION					
<i>by gender</i>					
Percentage of women in executive positions	%	12	11	9	
Proportion of female employees, Total	%	14	14	14	
Proportion of male employees, Total	%	83	82	83	
Proportion of employees with an unspecified gender, Total	%	3	4	3	
<i>by age group</i>					
Proportion of employees that are less than 30 years old, Total	%	19	19	20	
Proportion of employees that are 30-50 years old, Total	%	51	50	50	
Proportion of employees that are over 50 years old, Total	%	31	32	30	
WAGES AND EMPLOYEE BENEFIT					
Spend on employee wages and benefits Total	\$ millions USD	362	377	395	
Median total compensation for female employees, CAN	CAD/year	60,881	65,394	67,610	j
Median total compensation for male employees, CAN	CAD/year	75,422	87,385	92,606	j
Median total compensation for employees with an unspecified gender, CAN	CAD/year	66,421	64,838	82,305	j
Median total compensation for female employees, US	USD/year	57,013	61,944	62,664	j
Median total compensation for male employees, US	USD/year	62,686	75,498	76,615	j
Median total compensation for employees with an unspecified gender, US	USD/year	64,740	75,560	77,927	j
Ratio of median salary women to men, CAN	-	0.81	0.75	0.73	j
Ratio of median salary women to men, us	-	0.91	0.82	0.82	j

Data	Measurement	2022	2023	2024	Endnote
Defined contribution plan percentage of compensation contributed by employee, Total	%	5.1	5.1	5.1	
<i>by division</i>					
Woodlands	%	5	5	5	
Sawmills	%	5	5	5	
Pulp and paper	%	5.5	5.5	5.5	
Irving Personal Care	%	5	5	5	
Irving Tissue	%	5	5	5	
Defined contribution plan percentage of compensation contributed by employer, Total	%	5.1	5.1	5.1	
<i>by division</i>					
Woodlands	%	5	5	5	
Sawmills	%	5	5	5	
Pulp and paper	%	5.5	5.5	5.5	
Irving Personal Care	%	5	5	5	
Irving Tissue	%	5	5	5	
Median entry level wage ratio for female employees, Total, CAN	-	1.5	1.4	1.4	
Median entry level wage ratio for male employees, Total, CAN	-	1.5	1.4	1.5	
Median entry level wage ratio for employees with an unspecified gender, Total, CAN	-	1.6	1.6	1.8	
Median entry level wage ratio for female employees, Total, US	-	3.1	3.4	3.4	
Median entry level wage ratio for male employees, Total, US	-	2.8	2.2	1.7	
Median entry level wage ratio for employees with an unspecified gender, Total, US	-	2.0	1.7	1.8	

Data	Measurement	2022	2023	2024	Endnote
GOVERNANCE					
Number of countries	#	2	2	2	
Number of facilities, Total	#	23	23	24	
<i>by division</i>					
Woodlands	#	0	0	0	
Sawmills	#	12	12	13	
Pulp and paper	#	3	3	3	
Irving Personal Care	#	1	1	1	
Irving Tissue	#	5	5	5	
Corporate administration	#	2	2	2	
Percentage of total employees covered by collective bargaining agreements	%	37	36	33	
Substantiated complaints from outside parties regarding breach of customer privacy and loss of customer data	#	0	0	0	
Complaints from regulatory bodies regarding breach of customer privacy and loss of customer data	#	0	0	0	
Number of identified leaks, thefts, or losses of customer data, Total	#	0	0	0	
Corporate directors that received communication on the organization’s anti-corruption policies and procedures, Total	%	100	100	100	
Number of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation or corruption in which the organization has been identified as a participant	#	0	0	0	

Data	Measurement	2022	2023	2024	Endnote
OTHER					
University and college partnerships	#	19	19	21	
Community based partnerships	#	136	148	170	
Outdoor associations	#	12	12	12	
Motorized Recreation	#	4	4	4	
Stakeholder based group Partnerships	#	54	54	54	
Non Government Organizations	#	13	13	13	
Government organizations	#	5	5	5	
Fishing and Hunting Clubs	#	9	9	9	
Industry Associations	#	27	27	35	
# of Partner meetings	#	365	342	350	
New Partners	#	4	3	2	
Scholarships	CAD/year	147,442	176,747	169,745	
Stakeholder/Social media presence	# of Followers	35,850	54,131	56,034	
Stakeholder/Social media - Facebook, Engagement	Engagement Rate (%)	0.54	3.26	1.51	
Stakeholder/Social media - Instagram, Engagement	Engagement Rate (%)	4.76	4.31	1.92	
Stakeholder/Social media - LinkedIn, Engagement	Engagement Rate (%)	0.25	3.08	7.90	
Charitable Donations	CAD/Year	1,683,558	1,004,913	585,727	
Employee time volunteered	Hours	2,436	2,483	2,098	

ENDNOTES

and 2024 Restatements

- a. The emission factor rate increased by 25 per cent.
- b. Net carbon footprint includes freehold land removals only.
- c. The methodology for calculating removals changed in 2024 and therefore cannot be directly compared to 2023 and 2022. We are now using a five-year rolling average. See the Technical Supplement to the Carbon Footprint for further details.
- d. Peat bog land use change was not included in 2022.
- e. Bark burning was reduced in 2022 for operational reasons.
- f. Mill experienced one process upset in 2024.
- g. Increase in waste generated due to site being currently under construction for major capital investments.
- h. Water use increased for testing and start-up of the new Environmental Treatment Facility
- i. Increase in AOX emissions at Irving Pulp & Paper due to increased demand for high brightness products.
- j. Median wage information is an aggregate of multiple factors, including gender and job type. This metric is not intended for inference of wages paid to different genders in the same job type.



PO Box 5777
300 Union Street
Saint John, New Brunswick
E2L 4M3 Canada

Main Switchboard
1-506-632-7777

www.jdirving.com
info@jdirving.com