



# REPORT Forest Certification



## J.D. Irving, Limited Woodlands Operations – 2019 SFI® Surveillance Audit

Between June 14 - November 8, 2019, a 4 person audit team from KPMG Performance Registrar Inc. (KPMG PRI) carried out a surveillance audit of J.D. Irving, Limited's (JDI's) woodlands operations against the requirements of the 2015-2019 versions of the Sustainable Forestry Initiative® (SFI®) Forest Management and Fibre Sourcing standards. To provide for a more efficient audit, an ISO 14001:2015 surveillance audit was conducted at the same time. This Certification Summary Report provides an overview of the audit process and KPMG's findings.

### Description of J.D. Irving, Limited Woodlands Operations

#### 1. Forest Management Operations

JDI's forestry operations occur on both freehold and Canadian Crown Land and are managed out of JDI's woodlands offices located in New Brunswick (St. Leonard, Chipman, Doaktown, Deersdale, Sussex and St. George), Nova Scotia (Truro) and Maine (Fort Kent). The freehold land is in New Brunswick (728,000 ha), Nova Scotia (50,000 ha) and Maine (505,000 ha). On Canadian Crown Land in New Brunswick, the company is a sub-licensee on Licenses' #9, #3, #5, #1 and #8 and manages License #7 (1,038,000 ha). The present annual sustainable allocation levels established for JDI's Crown Licenses and Freehold lands are noted in the following table.

Crown Licence Volume Allocations (M <sup>3</sup> )								
New Brunswick							Nova Scotia	Total Crown
#1	#3	#5	#7	#8	#9	Total NB		
198,555	168,740	827	1,544,946	8,143	400,053	2,321,264	-	2,321,264
Freehold Annual Sustainable Harvest levels (M <sup>3</sup> )								
Maine	New Brunswick				Nova Scotia	Total Freehold		
	Northern	Central	Southern	Total NB				
1,086,000	813,000	657,000	348,000	1,818,000	57,000	2,961,000		

All woodlands districts track their annual harvest levels by broad timber type (softwood and hardwood) against these established annual harvest levels, with their respective performance in achieving the levels measured on a sustainable forest management report card. Performance in recent years has been close to the targets, with the annual averages for the actual harvest levels averaging overall slightly below the calculated allowed annual harvest levels for both conifer and hardwood.

Consistent with prior years, sub-licensee operators on License #7 in New Brunswick have operated under the JDI Environmental Management System (EMS) and are included within the scope of JDI's ISO 14001 and SFI certifications.

JDI operates throughout New Brunswick in the Southern and Northern Uplands, the Eastern Lowlands and Highlands and the Continental Lowlands. These areas are, to varying degrees, forested with stands of spruce (red, black and white) and fir (balsam), with smaller areas of white pine dominated forests along with cedar in lower lying areas. There are also intermittent components of red pine, hemlock, tamarack and jack pine. Hardwood stands are stocked most heavily with red maple and sugar maple, with components of yellow and white birch and poplar. Transitional areas often contain stands of mixed hardwood and softwood forest.

Maine woodlands contain largely the same species as in New Brunswick, but with a larger proportion of hardwood stands and a smaller proportion of pine stands.



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Woodlands operated by JDI in all jurisdictions are managed for timber production (for both hardwood and softwood), with consideration and protection of unique sites, late successional forests, deer wintering areas and mapped riparian zones. JDI carries out varied silviculture prescriptions, including even aged, uneven aged and shelterwood silviculture regeneration systems, along with pre-commercial thinning and commercial thinning to meet its timber supply/quality and ecological objectives. All even aged, clearcut stands prescribed for planting are planted with trees grown in J.D. Irving’s nurseries from seeds originating from specific, ecologically suited seed zones.

Each woodlands district revises its management plan for the Company’s freehold lands on a 5 year basis. Crown operations follow a planning process prescribed by the New Brunswick Department of Energy and Resource Development (NBERD), with the most recent plan submitted in 2014.

Long-term resource analyses are conducted and forest inventories for timber and non-timber values are maintained in support of long-term strategic and ongoing operational planning.

Growth and yield modeling is undertaken internally and cooperatively with NBERD to project future forest conditions and associated annual sustainable harvest levels for managed and natural forests.

Strategic planning is supported by a land classification system, soils inventories and depth to water table information. Recent plans have also incorporated refined forest inventory data based on LiDAR technology.

All plans are developed and evaluated using the Woodstock forest management model, with at least the first 5 years of harvest blocks spatially identified. This provides a significant level of control over the implementation of management plan commitments.

Each plan addresses non-timber values, particularly with respect to biodiversity conservation and water protection. Non-timber values addressed in the strategic planning process include such delineated special management zones as deer wintering areas, areas set aside under the Company’s Unique Areas Program and riparian zones and incorporation of the Company’s targets for old and very old late successional forests.

Other resource values identified during pre-screening, layout and operational planning are reflected in the GIS database for operational planning purposes (i.e., buffers or modified harvesting boundaries or practices to protect high conservation value forests, rare/endangered plants, animal species of concern, raptor/heron stick nests, visual quality, historic, geologic values, etc.). Site level operational plans incorporate specific operational approaches and silviculture strategies for addressing regulatory requirements and Company practices and commitments for identifying, managing and protecting specific timber and non-timber resource values.

### 2. Fibre Sourcing Operations

JDI’s fibre sourcing operations in New Brunswick, Nova Scotia, Prince Edward Island, Quebec and Maine provide fibre for the Irving Paper Limited and Irving Pulp and Paper Limited mills in Saint John, the Lake Utopia Paper corrugated medium mill in St. George, 10 sawmills (7 in New Brunswick, 1 in Nova Scotia and 2 in Maine). Fibre sourcing operations for all of the sawmills, pulp, paper and corrugated medium mills are included within the scope of JDI’s SFI fibre sourcing certification. JDI’s procurement program is an important component of meeting each mill’s fibre requirements.

Purchased stumpage is carried out under JDI’s environmental management system and is subject to similar levels of planning and monitoring to JDI’s freehold lands.

In New Brunswick, reliance is placed on marketing board monitoring processes established through the SFI Implementation Committee (SIC) to address the SFI BMP monitoring requirements for non-stumpage fibre purchases – i.e., external purchase monitoring is based on an empowerment model whereby the marketing boards do their own monitoring on an agreed upon sample basis, the results of which are reported to the SIC (which in turn drives

### 2019 JD Irving, Ltd.

#### Audit Findings

Minor nonconformities from previous audits that remain open	0
New major nonconformities	0
New minor nonconformities	0
New opportunities for improvement	6

#### Types of audit findings

##### Major nonconformities:

Are pervasive or critical to the achievement of the SFM Objectives.

##### Minor nonconformities:

Are isolated incidents that are non-critical to the achievement of SFM Objectives.

All non-conformities require the development of a corrective action plan within 30 days of the audit. Corrective action plans to address major nonconformities must be fully implemented by the operation within 3 months or certification cannot be achieved / maintained. Corrective action plans to address minor nonconformities must be fully implemented within 12 months.

##### Opportunities for Improvement:

Are not nonconformities but are comments on specific areas of the SFM System where improvements can be made.

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the selection of activities (including training) that the SIC supports). In Maine, BMP monitoring of non-stumpage purchases is based on the monitoring process established under the Certified Logging Professional (CLP) program, whereby CLP certified loggers are inspected and their performance evaluated against a number of BMP criteria. JDI purchase wood managers acquire the summarized results of this monitoring for the CLP certified loggers operating on land from which the Company procures logs to gain data on their performance level. In Nova Scotia and PEI, the monitoring process is based on supplier audits carried out by the JDI purchase wood manager. The results of each of these BMP monitoring processes feed into the SIC meetings and is used as an input for determining training strategies for the subsequent year.

### Audit Scope

The audit was conducted against the requirements of the 2015-2019 SFI Forest Management and Fibre Sourcing standards and incorporated a limited scope assessment against the SFI program objectives for:

- Forest Management Planning;
- Protection and Maintenance of Water Resources;
- Conservation of Biological Diversity
- Protection of Special Sites
- Recognize and Respect Indigenous Peoples' Rights
- Legal and regulatory compliance;
- Training and Education; and,
- Management review and continual improvement.

In addition, the following SFI Fibre Sourcing standard objectives were assessed with respect to the Company's fibre sourcing program:

- Biodiversity on Fibre Sourcing;
- Adherence to Best Management Practices;
- Legal and regulatory compliance;
- Training and Education;
- Communications and Public Reporting; and,
- Management review and continual improvement.

All SFI objectives are subject to audit at the time of re-certification and at least once during each cycle of surveillance audits with the frequency based on audit risks considering factors such as activity levels, prior year findings, changes in regulations and areas of public concern.

In the course of conducting our work on the objectives identified as in scope for 2019 we also identified both good practices and opportunities for improvement in relation to objectives that were not selected for assessment in 2019. These findings are included within our report. (For example, Objective 2 *Forest Health and productivity* was not selected for assessment in 2019 but during the course of our field inspections we noted items related to Objective 2 that are, as a result, included within this report as opportunity for improvement #2).

### The Audit

- **Audit Team** – The SFI and ISO 14001 audits were conducted by Chris Ridley-Thomas, RPBio(BC), EP(EMSLA), Craig Roessler, RPF(BC), EP(EMSLA), CF(SIF), Bodo von Schilling, RPF(BC) and Orrin Quinn RPF(BC) . Chris Ridley-Thomas, who was the lead auditor on the engagement, is president of KPMG PRI and has conducted numerous forest management audits against a variety of standards, including SFI, CSA



An example of a well selected wildlife tree retained during operations on Licence 7.



An example of a very old cedar protected under the Company's Legacy Tree Program (Maine).

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Z809, FSC and ISO 14001. The remainder of the audit team all have considerable experience conducting SFM audits against a variety of standards.

- **Audit Approach** – The 2019 audit involved an on-site assessment of selected elements of the Company’s sustainable forest management system and selected elements of the environmental management system. The audit also focused on assessing Company actions taken with respect to addressing the opportunities for improvement identified during previous KPMG PRI audits. Visits were made to all JDI operations with forest management responsibilities as well as fibre sourcing operations in New Brunswick, Maine and Nova Scotia to evaluate conformance with the requirements of applicable objectives of the 2015-2019 SFI Forest Management and Fibre Sourcing standards.
- **Site Visits** – Forestry operations were assessed in Northern New Brunswick (Black Brook), Central New Brunswick (Deersdale, Chipman and Doaktown), Southern New Brunswick (Sussex and St. George), Nova Scotia and Northern Maine woodlands operations. The audit also focused on the Company’s fibre sourcing operations in New Brunswick, Maine and Nova Scotia. The work included an assessment of field activities and the design of the underlying EMS and its delivery on the SFI objectives. The field inspection program covered 53 roads, 66 harvesting units, 23 silviculture sites, 10 procurement sites and 35 unique or special sites. The audit involved approximately 26 person days.
- **J.D. Irving, Limited’s SFI Program Representative** – Scott MacDougall served as J.D. Irving, Limited’s SFI program representative during the audit.

### Use of Substitute Indicators

One indicator included in the SFIS has been substituted for the purpose of this certification as follows:

Performance Measure 2.1 Indicator #1 in the SFI Forest Management Standard was substituted with the following indicator:

*Clear criteria to judge adequate regeneration and appropriate actions to correct understocked areas and achieve acceptable species composition and stocking rates for planting, direct seeding and natural regeneration, that include:*

- Documented reforestation plans, including designation of all harvest areas for either natural, planted or direct seeded regeneration and prompt reforestation, unless delayed for site-specific environmental or forest health considerations or legal requirements, through planting within two years or two planting seasons.*
- Growth of plantings, precommercial thinnings, and commercial thinnings relative to performance expectations (volume, piece size and species composition) consistent with the forest management plan.*
- Average growth rates on planted and naturally regenerated areas are on track to providing the product expectations set forth in the forest management plan.*
- Reforestation strategies are designed to maintain or increase current growing stock.*

The rationale for the substitution was to address reforestation requirements at the landscape level rather than the cutblock level to better align with management plan objectives for regenerating stands.



The field audit observed numerous examples of well-designed and installed (and removed) temporary bridges that effectively protected streams and streambanks (Licence 7).



Field inspection sites revealed good survival rates on trees planted on Licence 7 in 2019.

### Audit Objectives

The objectives of the 2019 audit were to evaluate the sustainable forest management and environmental management systems at J.D. Irving, Limited to:

- Determine their conformance with the requirements of the ISO 14001:2015 and 2015-2019 SFI Forest Management and Fibre Sourcing standards within the scope of the audit;
- Evaluate the ability of the systems to ensure that J.D. Irving, Limited meets applicable regulatory requirements;
- Evaluate the effectiveness of the systems in ensuring that J.D. Irving, Limited meets its specified objectives; and
- Where applicable, identify opportunities for improvement.

These objectives were met.

### Evidence of Conformity with SFI 2015-2019

Primary sources of evidence assessed to determine conformity with the SFI 2015-2019 Forest Management and Fibre Sourcing standards are presented in the following table.

SFI Forest Management Objective #	Sources of Key Evidence of Conformity
1. Forest Management Planning	New forest management plans. Use of LIDAR in forest management planning. Remainder of Objective 1 not selected for assessment during the 2019 surveillance audit. Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
2. Forest Health and Productivity	Planted stand survival rates Treatment of blue lettuce Remainder of Objective 2 not selected for assessment during the 2019 surveillance audit. Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
3. Protection and Maintenance of Water Resources	Forest Management Plans (FMPs), Environmental Management System (EMS) Manual, Standard Operating Procedures (SOPs) and Policies, Sustainable Forest Management (SFM) report card, Work Orders (WOs), Best Management Practices (BMPs) for road building, and soft ground, Company inspection and audit records, district road and bridge maintenance inspection records and lists, field inspections, staff and contractor interviews.



Example of a historic woods mill-site protected under the Company's Unique Areas Program (Maine).



An example of a large vernal pool identified and protected during operations on Licence 7.

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SFI Forest Management Objective #	Sources of Key Evidence of Conformity
4. Conservation of Biological Diversity	FMPs, EMS, SOPs and Policies (including in regards to rare plant pre-screening, maintaining vertical structure (islands), legacy trees, vernal pools, protection of raptor and heron stick nests and late successional forests), Company forest species of concern manual, District rare or endangered plants manuals, Unique Areas GIS database/map layer, Sustainable Forest Management (SFM) report card, WOs, Company inspection and audit records, Field inspections, Staff and contractor interviews.
5. Management of Visual Quality and Recreational Benefits	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
6. Protection of Special Sites	FMPs, EMS, SOPs, WOs, Unique Areas GIS database/map layer, Field inspections, staff and contractor interviews.
7. Efficient Use of Fibre Resources	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
8. Recognize and Respect Indigenous Peoples' Rights	JD. Irving Ltd.'s Public Advisory Committee Process document, Company and DNR stakeholder engagement process/records, FMPs, EMS, SOPs, WOs, Unique Areas GIS database/map layer, Field inspections, Staff and contractor interviews.
9. Legal and Regulatory Compliance	EMS, Company inspection, monitoring, audit, nonconformity, non-compliance, incident, and action plan records, Company's Code of Business Conduct, Company inspection and audit records, field inspections, interviews with key staff.
10. Forestry Research, Science & Technology	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
11. Training and Education	EMS, Environmental policy, Responsible wood purchasing policy, Company training program and records, SIC training resources/materials, Interviews with key staff and contractors.
12. Community Involvement and Landowner Outreach	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.



An example of a brook buffered during operations on Licence 7.

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SFI Forest Management Objective #	Sources of Key Evidence of Conformity
13. Public Land Management Responsibilities	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
14. Communications and Public Reporting	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
15. Management Review and Continual Improvement	EMS, corporate and district management review records, SFM report card, Internal audit records, district inspection, monitoring and audit records.
SFI Fibre Sourcing Objective #	Sources of Key Evidence of Conformity
1. Biodiversity in Fibre Sourcing	EMS, Responsible wood purchasing policy, Best Management Practice (BMP) manuals/handbooks distributed to landowners, Company records respecting landowner outreach, Field audit of purchase wood blocks, Staff and logger interviews.
2. Adherence to Best Management Practices	EMS, Responsible Wood Purchasing Policy, BMP manuals/handbooks distributed to landowners, certified and qualified logger lists/websites, Company records respecting the use of qualified resource and logging professionals, Company inspection and audit records, field audit of purchase wood blocks, visit to the Southern New Brunswick Marketing Board, staff and logger interviews.
3. Use of Qualified Resource and Logging Professionals	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
4. Legal and Regulatory Compliance	EMS, Company inspection, monitoring, audit, nonconformity, non-compliance, incident, and action plan records, Company inspection and audit records, Company's Code of Business Conduct, field inspections of JDI stumpage sites and purchase wood sites, interviews with key staff.
5. Forestry Research, Science & Technology	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
6. Training and education	EMS, Environmental policy, Responsible wood purchasing policy, Company training program and records, SIC training resources/materials, Interviews with key staff and contractors.
7. Community Involvement and Landowner Outreach	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.



An example of a recently installed embedded culvert used to facilitate fish passage that replaced an old, failing pipe identified under the Company's road inspection and maintenance program (License 7).

SFI Fibre Sourcing Objective #	Sources of Key Evidence of Conformity
8. Public Land Management Responsibilities	Although not one of the objectives selected for the 2019 surveillance audit, opportunities for improvement were noted when they were observed during field inspections.
9. Communications and Public Reporting	KPMG PRI SFI public summary report, SFI Progress Report and supporting records, Past SFI progress reports and supporting records.
10. Management Review and Continual Improvement	EMS, corporate and district management review records, SFM report card, internal audit records, district inspection, monitoring and audit records.
11. Promote Conservation of Biological Diversity, Biodiversity Hotspots and High-Biodiversity Wilderness Areas	N/A – Company does not source fibre from outside Canada and the US.
12. Avoidance of Controversial Sources including Illegal Logging	N/A – Company does not source fibre from outside Canada and the US.
13. Avoidance of Controversial Sources including Sources without Effective Social Laws	N/A – Company does not source fibre from outside Canada and the US.



An example of a recently commercially thinned stand showing quality trees retained by operations on Licence 7.

### Good Practices

The following good practices were noted during the audit:

- SFI Objective 1 (Forest Management Planning):** while JDI Nova Scotia operations wait for access to Lidar imaging, they are using drones to improve imaging and promote sustainable forest management (SNB).
- SFI Objective 2 (Forest Health and Productivity):** low levels of soil disturbance were observed as a result of good levels of operator awareness of the Company's controls over rutting (including the depiction on work order maps of operable wet areas and use of brush mats or avoidance) (ME, SNB, CNB).
- SFI Objective 2 (Forest Health and Productivity):** the field audit observed examples of material and vegetation being piled onto old roads (that were being closed) near the junction of new replacement roads to visually screen the road and prevent further access (ME).
- SFI Objective 2 (Forest Health and Productivity):** trials with different herbicides and treatments have resulted in an approach to manage blue lettuce (a native herb increasingly competing with planted conifers) (BB).
- SFI Objective 2 (Forest Health and Productivity):** it was noted that chipping site efficiency and set up audits provide a thorough assessment of chipper operations (CNB).



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- **SFI Objective 2 (Forest Health and Productivity):** field inspection of first and second entry commercial thinning identified effective implementation of work order prescriptions and low levels of residual stand damage and post-harvest windthrow (CNB).
- **SFI Objective 2 (Forest Health and Productivity):** field inspections identified a good example of strip cut execution on a hill with converging swales at the bottom (SNB).
- **SFI Objective 3 (Protection and Maintenance of Water Resources):** field inspections identified effective crossing installation and stabilization and effective temporary crossing removals designed to limit future sedimentation potential (CNB, SNB).
- **SFI Objective 3 (Protection and Maintenance of Water Resources):** field inspections identified good delineation of a no track zone around the head of a draw leading into a riparian area (CNB).
- **SFI Objective 4 (Conservation of Biological Diversity):** field interviews and inspections noted the effective implementation of the rare plant training program and the environmental rewards program to JDI staff to promote and protect biodiversity (All).
- **SFI Objective 6 (Protection of Special Sites):** the field audit observed that unique areas were well selected to protect high conservation values such as late successional forests, fens with moose wintering habitat, rare plant ecosystems, smelt habitat and domestic water intakes for recreational outfitters (ME).
- **SFI Objective 5 (Management of Visual Quality and Recreational Benefits) and SFI Objective 12 (Community Involvement and Landowner Outreach):** field interviews noted an example of JDI Nova Scotia planning personnel working with a local water user group as well as an environmental group to plan 10 years of harvesting operations in a watershed area in order to address concerns over harvest start-up after 10 years of no harvest in the area (SNB).



The field audit observed unique areas that were well selected to protect high conservation values such as fens and bogs (upper picture) and unique ecological sites (Red oak grove in lower picture) (Maine).

### Areas of Nonconformity

No major or minor nonconformities were identified during the 2019 SFI / ISO 14001 audits.

### Opportunities for Improvement

The 2019 audit identified the following opportunities for improvement with respect to the SFI 2015-2019 Forest Management and Fibre Sourcing standards:

#### **SFI FM Objective 15 (Management Review and Continual Improvement, ISO 14001@ 9.1):**

An opportunity for improvement was identified in processes for managing the EMS non-conformance and recordable incident database and road and block updates for ERD relating to:

- 2 older non-conformances had not been closed out in the non-conformance database.
- Minor inconsistencies were noted in the recording of incidents and non-conformances where there is more than one related category that the incident can be listed under (e.g., incidents may relate to both work order conformance and road construction).

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- One instance was noted where a new (2018) road had not been included in the activity update provided to ERD.
- **SFI FM Objective 2 (Forest Health and Productivity), SFI FM Objective 3 (Protection and Maintenance of Water Resources), ISO 14001@ 6.22 and 8.1):** Isolated weaknesses was noted in relation to managing the impacts of windthrow:
  - Instances were noted where merchantable timber that was not windfirmed was left in no track zones that were established to minimize impacts around wet areas and draws. Where this timber is subsequently blown over this can lead to increased sedimentation potential rather than the reduction in sedimentation potential that was an objective of the no track zone .
  - Recent windthrow losses and the nature of some of these losses (e.g. where there was evidence of prior windthrow and tree crowns that were susceptible to windthrow) may indicate a need to focus more effort on mitigating windthrow potential at the work order development stage.
- **SFI FM Objective 2 (Forest Health and Productivity), SFI FM Objective 3 (Protection and Maintenance of Water Resources), ISO 14001@ 6.22 and 8.1):** Isolated weaknesses were identified in the clarity and content of work orders developed for harvest stands as follows:
  - While it was noted that there was good delineation of harvest areas to be subjected to different prescription types, in cases where the area delineated was only a small portion of a larger harvest area there appeared to be a higher likelihood of the prescription not being effective. This likely results from the small area being treated with the equipment best suited to the main portion of the block, rather than the equipment best suited to the small area delineated with a different prescription (SNB) .
  - In one case, a prescription to not damage regeneration in an area with poor quality regeneration was ineffective with much of the regeneration being blown over or falling down post-treatment (CNB) .
  - 2 Work orders for harvest areas where there were white pine retention objectives did not mention these objectives. The white pine was actually retained by the harvest operations (CNB).
  - An unclear buffer prescription was noted in a work order, which included removal of all hardwood and did not indicate whether side selection should occur between buffer strips. Side selection occurred between some strips but not others in the buffer and the hardwood comments did not appear to be applicable (CNB).
- **SFI FM Objective 9 (Legal and Regulatory Compliance), ISO 14001 @ 8.2):** In an isolated instance, a large (>450l) fuel tank had not been re-certified at the required 5 year interval .
- **SFI FM Objective 2 (Forest Health and Productivity), SFI FM Objective 3 (Protection and Maintenance of Water Resources), ISO 14001@ 8.1):** Isolated weaknesses were noted in procedures related to maintenance of site productivity and avoidance of siltation as follows:
  - In one instance the debris zone surrounding a chipper was larger than allowed for under the Company’s Standard Operating Procedure (SNB).



JD Irving has established and implemented a late-successional forests policy for maintaining late-successional stages of five stand types across its freehold lands. The above pictures show old cedar (top) and old tolerant mixedwood (bottom) stands retained under this policy (Maine).

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- In one instance, it was noted that an older road used for recent harvest activity lacked mechanisms to move water off the road, leading to water traveling along the road and picking up sediment before exiting (SNB).
- In one instance, recent rutting on an active block had not been identified by the operator as a recordable incident (CNB).
- In one instance, rutting was identified by an operator on an active block and recorded but actions had not been taken to avoid siltation into an adjacent vernal pool (CNB).

**SFI FM Objective 2 (Forest Health and Productivity), SFI FM Objective 3 (Protection and Maintenance of Water Resources), ISO 14001@ 8.1):** In an isolated case, inspection of JDI harvest activities as a sub-licence on Crown Licence 1 identified weaknesses in risk management around harvest sites on steeper slopes:

- While JDI as a sub-licencee is not responsible for the harvest plan, it is responsible for the execution of the plan. It is not clear that in this handover between licencee planning and sub-licencee operations that JDI or the associated harvest contractor fully considered the potential risks associated with the site topography before attempting to conduct operations. Portions of the plan area had slopes that were not operable with current equipment.
- JDI’s Site Disturbance Procedure specifies requirements for avoiding siltation, including specific requirements for all slopes > 35% but does not explicitly address actions beyond repair of damage caused by rutting on lesser slopes. There is an opportunity to extend the procedures to address situations where water management may be required on slopes of less than 35% in the absence of any rutting (Note: siltation was not observed at the site).
- While an entry was made in the non-conformance database related to the harvest activities on this site it focused solely on the safety considerations raised and did not fully consider root causes or explicitly address the related planning hand over considerations.

### Audit Conclusions

The audit found that J.D. Irving, Limited’s sustainable forest management and environmental management systems:

- Were in conformance with the requirements of the SFI 2015-2019 Forest Management and Fibre Sourcing standards and ISO 14001:2015 standard included within the scope of the audit;
- Continue to be effectively implemented; and
- Are sufficient to systematically meet the commitments included in JDI’s environmental policy provided that the systems continue to be implemented and maintained as required.

As no major nonconformities were identified during the audit, the audit team recommended that JDI continue to be certified to the 2015-2019 version of the SFI Forest Management and Fibre Sourcing standards. JDI’s SFI Forest Management and Fibre Sourcing certificates are valid through October 27, 2020.



An example of a Goshawk nest identified during layout and buffered from logging (License 7).

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