

**ENVIRONMENTAL ASSESSMENT REGISTRATION
JD IRVING, LIMITED**

**SAWMILL DECOMMISSIONING AND CONSTRUCTION PROJECT
DOAKTOWN, NB**

Our File No.: 90-15-00-C

April 2016

Prepared for:



Prepared by:





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7 April 2016

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EIA file no.: 4561-3-1415

Mr. Thériault:

*Subject: Environmental Impact Assessment Registration Document, Doaktown Sawmill
Decommissioning and Construction, South Road, Doaktown, NB.*

We are pleased to present you with this registration document for the above-mentioned project.

Thank you for your business and please do not hesitate to contact us should you require further information or assistance.

Yours truly,

Jonathan Burt, EP
Environmental Specialist
ENVIRONMENT department

JB/SL

cc- (if applicable)

Enc.

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EXECUTIVE SUMMARY

JD Irving, Limited ('JDI') operates an Eastern White Pine (*Pinus strobus*) sawmill and value-added plant located on various parcels at 200 South Road, including a wood yard, sawmill, steam kiln, finger-jointer building and various other buildings. The facility processes approximately 30,000,000 board feet of E. W. Pine lumber annually, on a 2-shift (day/night) production line.

JDI is proposing to modernize the sawmill by decommissioning (demolishing and removing) the existing sawmill building and constructing a new, modern sawmill building on the Doaktown site. The project is estimated to generate approximately 100 direct and indirect construction jobs. The project will result in a 10% increase in wood fibre recovery.

Roy Consultants undertook an environmental impact assessment (EIA) for the proposed project on behalf of JDI to assess the potential environmental and social impacts that may occur as a result of the proposed project. The findings of this assessment are presented in this report, which meets the requirements of the New Brunswick *Environmental Impact Assessment Regulation*.

This report is the Environmental Impact Assessment registration document for the proposed project, and was prepared as per the Guide to Environmental Impact Assessment in New Brunswick and the sector-specific guidelines Additional Information Requirements for Timber Processing Projects (v. 04-07-14).

No changes will be made to the existing kiln, biomass boiler or value-added product areas of the sawmill complex, and therefore these are not included in the scope of this assessment.

No significant increase in adverse environmental impacts is anticipated from the proposed development.



Photo 1: Doaktown Eastern White Pine Sawmill (Google earth).

THE PROPONENT

1.1 NAME OF PROPONENT

The proponent is Doaktown Sawmill and Value-Added Centre, Div. of JD Irving, Limited.

1.2 ADDRESS OF PROPONENT

120 South Road, Doaktown NB E9C 1H4

1.3 CHIEF EXECUTIVE OFFICER

Mr. Lloyd MacFarlane, Plant Manager

1.4 PRINCIPAL CONTACT PERSONS FOR THE PURPOSES OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The principal contacts for the Environmental Impact Assessment are:

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1.5 PROPERTY OWNERSHIP

The subject properties, SNB parcel identification (PID) numbers 40049785, 40342263, 40049777, 40049801 and 40409666 are owned by the proponent, JD Irving, Limited.

No Crown Land will be impacted by this project.

2. THE UNDERTAKING

2.1 NAME OF THE UNDERTAKING

The undertaking is *Doaktown Sawmill Decommissioning and Construction Project*.

2.2 PROJECT OVERVIEW

The Doaktown Sawmill is an Eastern White Pine sawmill processing approximately 125,000 million tons (MT)/year of E. W. Pine logs and producing 30,000,000 foot board measure (FBM)/year of lumber. The lumber produced by the sawmill is derived from processing twelve (12) to sixteen (16) foot logs into 1x4, 1x6, 1x8, 1x10 and 1x12 products.

Logs arriving at the sawmill are unloaded from trucks in the log yard, scaled (measured for volume, size, etc.) and stored pending their use. From the log yard, the logs are first placed on the sawmill infeed deck and are directed to the debarkers where they are mechanically stripped of their bark. The bark (now considered 'hog fuel') is conveyed to an exterior containment and then trucked to covered storage for the biomass boiler, or trucked off-site. After debarking, logs are processed in the sawmill into one inch board, stacked and then prepared for the drying process. Other than lumber, the sawmill also produces bark and sawdust (hog fuel for biomass boiler), and wood chips.

Following sawing, the boards are now directed to one of five (5) existing steam dry kilns, which operate at an average temperature of 180^oF. The steam is generated on-site with the existing biomass boiler dedicated for this purpose. Once the drying process is completed, typically in six to seven days, the dried lumber is directed to the existing Value Added Centre, where it is dressed to ensure that it is of uniform dimensions, packaged, and shipped to market via transport truck.

JDI is proposing the modernization of the Doaktown Sawmill by decommissioning the current sawmill building, which produces the above-described output in two sawmill work-shifts (day shift and night shift), and constructing a new, modern sawmill building which will significantly increase sawmill efficiency and enable JDI to be more competitive in the pine lumber market. Additionally, this modernization is not anticipated to significantly increase the overall air emissions of the facility, resulting in a negligible increase in environmental effects in comparison with the current facility.

JDI is proposing to modernize the sawmill process by building a new, modern sawmill adjacent to the current sawmill. This new sawmill will be contained within a single, pre-fabricated structure and will use optimized log scanning technology to more efficiently process the logs, thereby producing approximately 10% higher lumber yields without increasing the number of logs.

No changes will be made to the kiln, biomass boiler or value-added centre portions of the sawmill complex.

Construction of the new sawmill is anticipated to begin prior to initiating the demolition of the existing sawmill, to permit JDI to continue producing lumber uninterrupted. In general terms, the project will be completed in the following phases:

1. Site preparation for new sawmill construction;
2. Construction of new sawmill;
3. Demolition of existing sawmill, and
4. Grading, landscaping and preparation of yard surrounding new sawmill.

The project is anticipated to be initiated in late-summer or early fall of 2016.

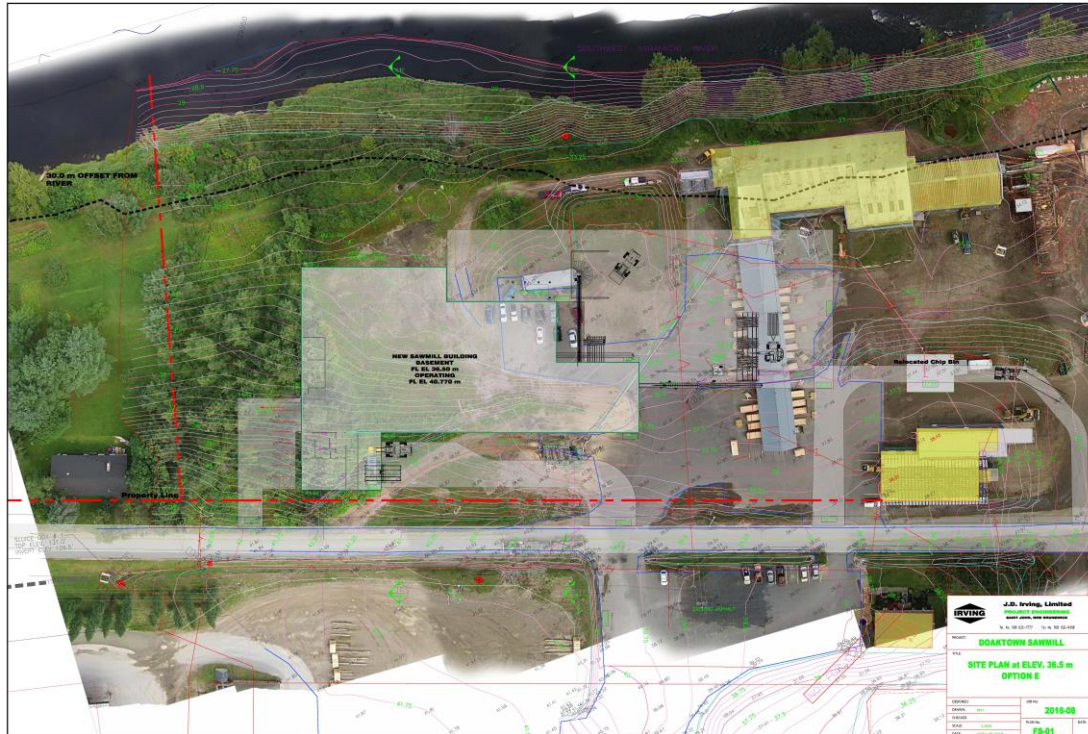


Figure 1: Proposed project development area aerial view.

As the project represents a significant modification to an lumber mill (construction and demolition), it must be registered as per item k) of Schedule A of the NB *Environmental Impact Assessment (EIA) Regulation – Clean Environment Act*: “item k): all facilities for the commercial processing or treatment of timber resources other than fuelwood, except maple sugaries, shingle mills and sawmills producing less than one hundred thousand foot board measure annually”.

2.3 PURPOSE/RATIONALE/NEED FOR THE UNDERTAKING

JDI is a privately-owned company, and the Doaktown Sawmill is one of their oldest sawmills currently in operation. In its current configuration, the sawmill process is inefficient, and costly on a per-board-foot basis. In order to remain competitive and to meet the needs of the white pine lumber market, JDI is seeking to modernize their sawmill process, increasing efficiency, and

therefore profitability. This project will meet these objectives while continuing to be a major employer in Doaktown for the long term.

The ‘Do-Nothing’ or null alternative is not an option for this project. JDI must continue to upgrade and modernize its facilities in order to remain economically viable in New Brunswick, and to compete on the international wood fiber market.

2.4 PROJECT LOCATION

The project is located on SNB property identification (PID) numbers 40049785, 40342263, 40049777, 40049801 and 40409666, at civic location 175 South Road, Doaktown, in the Parish of Blissfield, Northumberland County, New Brunswick. The centre of the property is georeferenced at 46°33’32.10”N, 066°06’27.53W.

The project is located in a rural setting within the Village of Doaktown and is zoned *Industrial (IND)* and *Rural (RU)*, with a narrow portion of the site along the Southwest Miramichi River zoned *Conservation (C)*.

The subject properties are wholly owned by JDI and total approximately 103 ha.

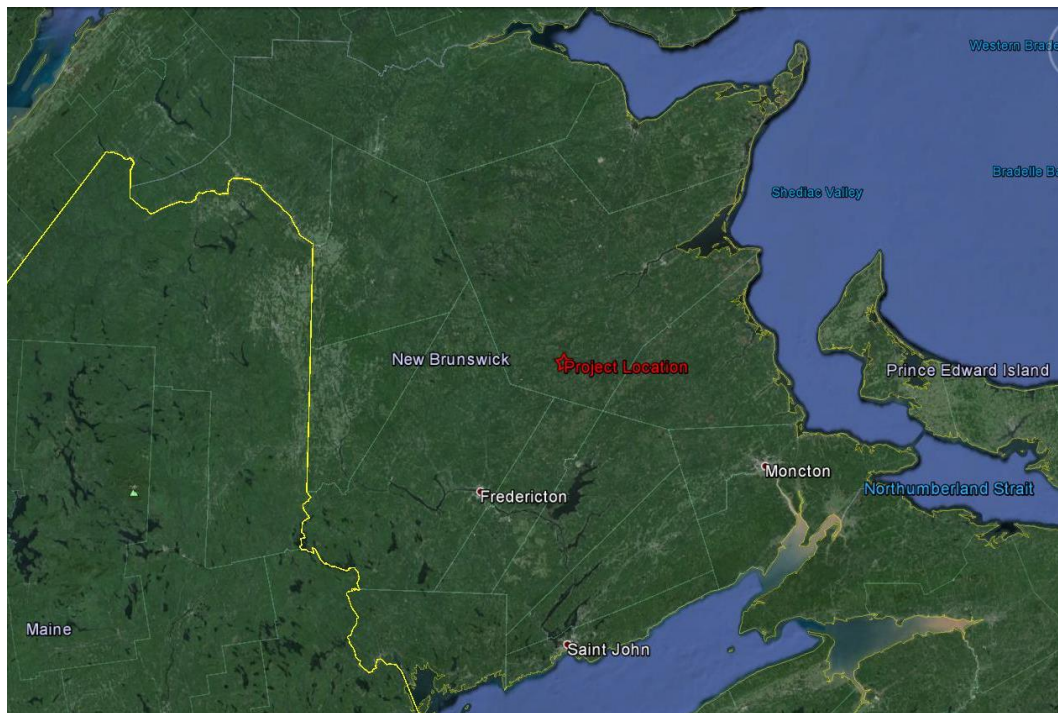


Figure 2. Project location.

2.5 SITING CONSIDERATIONS

The location of the proposed undertaking is ideally suited for the intended purpose. The existing facility has been operating at this site since under the ownership of JDI since the late 1980's/early 1990's. The land is properly zoned for the intended land use, is currently owned by the proponent, and there is sufficient space on site for the proposed expansion while maintaining a buffer with neighbours and allowing the demolition and construction to take place without necessitating a full shutdown of the sawmill facilities.

JDI owns and maintains property on the south side of South Road, which were reviewed as potential locations for the new sawmill project. However, due to area constraints, this option would require relocating portions of Fowler Brook and constructing a new bridge. Due to the potential environmental, logistical and financial impacts, this option was not chosen. The proposed site is ideally suited to minimize environmental impacts from the construction and operation of the new sawmill.

2.6 PHYSICAL COMPONENTS AND DIMENSIONS OF THE UNDERTAKING

The proposed project involves three separate components:

1. The construction of a new sawmill building;
2. The decommissioning and demolition of the current sawmill, and
3. Final site levelling and landscaping.

The total footprint, or Project Development Area (PDA), of the undertaking will be approximately 1.5 hectares, including both construction and demolition components. Approximately 1000 square metres of the PDA, the western edge, is vegetated and will require clearing. The riparian buffers along the Southwest Miramichi River and Fowler Brook will be avoided.

2.6.1 NEW SAWMILL CONSTRUCTION

The new sawmill will consist of the construction of a new, metal-clad pre-engineered building approximately 37,000 square feet (3,437 square metres) in size, which will house new sawmill equipment and produce 30,000,000 FBM/year.

Construction of the new sawmill will include the following:

1. Site preparation, including the removal of mobile equipment, vehicles, vegetation and site levelling (includes installation of sediment and erosion controls as per JDI Site Specific Environmental Protection Plan, or SSEPP);
2. Pouring of a concrete slab/frost wall foundation;
3. Installation of a pre-fabricated ("pre-fab"), metal clad building, including all necessary plumbing, electrical etc. infrastructure;
4. Installation of a sanitary septic tank and field system for employee use;
5. Installation and commissioning of sawmill equipment, including conveyors, mechanical debarker, sawing equipment, drop-sorter and stacker, and
6. Installation of exterior infrastructure, including the log deck and chip pneumatic conveyor system .



Figure 3. Rendering of the new sawmill looking northwest for illustration purposes only (overhead chip conveyor will be excluded from final design).

The new sawmill will be situated approximately 20m further from the river's normal high water mark than the existing sawmill structure. By comparison to the existing sawmill building and yard, no portion of the new yard will extend into the 30m riparian buffer (refer to figure 1). A stormwater management system will be constructed, designed for 1:100 year storm volumes, and will include a protected (vegetated and stabilized) perimeter buffer zone. Stormwater will be directed overland and percolate through the ground before reaching the river. A sediment pond may be included in the final design based on flow calculations.

In order to ensure the continuous operation of the sawmill while the new sawmill building is under construction, the lumber sorting and stacking line, which currently extends south from the sawmill, may be temporarily relocated to provide space for the new construction.

2.6.2 SAWMILL DECOMMISSIONING

The proposed project involves the decommissioning of the existing sawmill building, consisting of a wood-frame structure with steel cladding (siding), steel roof and concrete slab foundation. The structure consists of the following components used in the sawing process:

- Sawmill infeed deck;
- Debarker;
- Chip storage bin;
- Hog fuel (bark/sawdust) containment;
- one (1) breakdown lines (containing conveyors, vertical band saw carriage, horizontal resaw, board edger and automated trimmer and exterior green chain, and

- Exterior lumber stacking.

The decommissioning of the sawmill will be completed as any typical structure demolition. The sequence of decommissioning will be as follows:

- Site Preparation (removal of exterior and mobile equipment, installation of erosion and sediment controls as per the JDI SSEPP);
- Removal of interior mill equipment;
- Removal of non-structural interior infrastructure (lighting, electrical, plumbing, etc.);
- Removal of ceiling tiles;
- Removal of windows, doors, roof, siding, framing, etc;
- Removal of concrete frost wall (slab to remain in place), and
- Levelling and grading of site.

Hazardous Materials: A recent inspection of the sawmill identified two (2) potential sources of asbestos-containing materials (ACMs). JDI obtained samples of each and sent them for analysis at EMSL Analytical Inc. in Mississauga, Ontario for analysis. One sample obtained from the interior ceiling tiles was confirmed as containing ACM, specifically 10% Chrysotile, a non-friable form of asbestos.

Due to various upgrades performed by JDI since acquiring the sawmill in the late 1980's, and the recent inspection and sampling and analysis of materials in the sawmill, no additional hazardous building materials are anticipated to be encountered during the decommissioning.

Hydraulic oil within the equipment will be carefully flushed/drained, temporarily stored (48 hours or less) and removed from the site by a licensed carrier and properly disposed of, as per the requirements of the NB *Used Oil Regulation*.

ACMs will be removed by a certified contractor using Asbestos Work Procedures as defined by *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick* (NB Regulation 92-106).

Equipment: Due to their age and technology, all assets, primarily equipment used in processing the logs, will be removed from the site and sold for scrap recycling.

Construction and Demolition (C&D) Waste: Upon removal of sawmill equipment, all remaining materials from the demolition of the existing sawmill will be classified as either 'waste' (Construction / Demolition) or 'recyclable' (scrap). Waste will be removed, transported and disposed of properly at an approved waste disposal facility (Fredericton or Chipman).

Recyclable waste: Recyclable waste materials, primarily metal (roof, siding, interior stair/walkways, etc.), will be sold for scrap to an approved recycling facility.

Upon completion of removal of all waste materials, equipment and C&D waste, the site will be graded and prepared for the completion of the new yard.

Erosion/Sediment Controls: Erosion and sediment controls will be implemented during construction as per the JDI SSEPP, and direct any surface runoff to the existing catch basins, perimeter ditch and sedimentation pond, prior to discharge to the Miramichi River.

All demolition and transportation activities will be completed by local, licensed contractors under the direct supervision of JDI.



Photo 3: Exterior of sawmill showing condition of metal siding.

2.7 OPERATION AND MAINTENANCE DETAILS

Upon completion of the new sawmill, logs will be produced according to the following sequence (identical sequence to the existing sawmill, but with increased efficiency):

- Logs from yard loaded into infeed deck by mobile loader;
- Logs are debarked in the mechanical debarker;
- Bark and sawdust is collected and sent to the biomass boiler as hog fuel;
- Logs are scanned with increased accuracy to optimize output / log;
- Logs are sawed into boards horizontal re-saws);
- Boards are edged in the board edger;
- Chips are collected and sent to the storage container via pneumatic conveyor for trucking off-site;
- Boards go through the trimmer and drop sorter;
- Boards are collected, stacked and proceed through the existing kiln and dressing operation;

The new sawmill will result in minimal changes to the amount of wood produced, air or water emissions, and wood feedstock required, while significantly increasing the efficiency of the production.

Table 1 compares the existing and post-construction operational parameters, with increases (yellow) and reductions (green) highlighted.

Table 1 Doaktown Sawmill operational parameters, existing and projected.

ITEM	DESCRIPTION	EXISTING OPERATION	FUTURE OPERATION
1	Log Volume Requirements	125,000MT/year	125,000MT/year
2	Maximum Onsite Log Storage	30,000 MT based on 10 weeks storage	30,000 MT based on 10 weeks storage
3	Log Yard	On Existing Site	On Existing Site
4	Hot Pond Operation	N/A	N/A
5	Sawmill Production	Gross 27,000,000 FBM/year	Gross 30,000,000 FBM/year based on improved yield from same log
6	Drying Capacity	30,000,000 FBM/year	30,000,000 FBM/year
7	Air Permit	Class 2	Class 2
8	Bark Burned Onsite	32,000 GMT/year	35,000 GMT/year
9	Dust Collection	N/A	N/A
10	Noise	No change	no change/negligible
11	Snow Dump Location	No change	No change
12	Log Trucks (inbound)	950 loads/year	950 loads/year
13	Chip Trucks (outbound)	380 loads/year	380 loads/year
14	Bark Trucks (outbound)	0	0
15	Sawdust Trucks (outbound)	Mixed with bark	Mixed with bark
16	Shavings Trucks (outbound)	516 loads/year	500 loads/year
17	Lumber Trucks (outbound)	815 loads/year	915 loads/year
18	Lumber Rail Cars (outbound)	N/A	N/A
19	Bark (total bark production)	33,730 GMT	33,730 GMT
20	Sawdust – sawmill	Mixed with bark	Mixed with bark
21	Chips – sawmill	36,700 GMT	No 36,700 GMT
22	Sawdust – planer mill	Mixed in with planer shavings	Mixed in with planer shavings
23	Chips – planer mill	Mixed in with sawmill chips	Mixed in with sawmill chips
24	Shavings – planer mill	No change	No change
25	Water treatment for logs	June 1 – Sep. 30	No change
26	Water treatment for logs	30 gals/min	30 gals/min
27	Water treatment for logs	43,200 gals/day	43,200 gals/day

Table 2 outlines the past emissions from the sawmill facility (including biomass boiler) based on the previous sawmill's production.

Table 2: Doaktown Sawmill Emissions – tons per year.

COMPONENT	2010	2011	2012	2013	2014	2015	PROJECTED NEW MILL	% CHANGE
Biomass Boiler Bark Used, GMT/year	24,997	31,372	26,497	27,500	31,810	27,324	35,000	+1.2
Total PM, tons/year (stack testing 2005)	9.8	9.8	9.8	9.8	9.8	9.8	11	+1.1
Approval to Operate PM Limit	20	20	20	20	20	20	20	-
NOx Emission	25	31	26	27	31	27	34	+1.3
Approval to Operate NOx Limit	39	39	39	39	39	39	39	-
Kiln Production MBF	24,561	27,663	24,547	25,194	27,068	27,030	30,000	+1.1
Chip, Bark, Sawdust Piles, GMT/year	57,858	64,233	58,992	62,125	70,430	66,541	68,730	+1.0
Total PM	87	96	88	99	119	116	118	+1.0
Chipper and Debarkers Operations, GMT/year	57,858	64,233	58,992	62,125	70,430	66,541	68,730	+1.0
Total PM	5	5	4	4	4	4	4	-
Total Site PM	102	111	102	113	133	130	133	+1.0

2.8 FUTURE MODIFICATIONS, EXTENSIONS OR ABANDONMENT

As of the date of preparation of this report, no additional expansion or abandonment of the facility is planned or anticipated.

Any modifications, expansions, or decommissioning of the proposed project would be subject to review under the Approvals process.

2.9 PROJECT-RELATED DOCUMENTS

Refer to Appendix D for the following project-related documents:

- NB DELG Approval to Operate #I-8372;

3. DESCRIPTION OF THE EXISTING ENVIRONMENT

A site visit was conducted on March 19th, 2016 to survey the PDA, surrounding environmental features, the current sawmill operations, etc. A desktop review of existing reports, documents and applicable legislation, including the Atlantic Canada Conservation Data Centre (ACCDC) and the NB DELG/Nature Trust Environmentally Sensitive Area database, was conducted. The following sections describe the biophysical and socio-cultural environment of the site.

3.1 PHYSICAL AND NATURAL FEATURES

3.1.1 GENERAL

The site of the proposed project is an existing commercial/industrial property located adjacent to the Southwest Miramichi River, in Doaktown, New Brunswick. The site consists of gravel and paved areas surrounding the sawmill structures.

The site is bordered to the south by the South Road, to the west by a partially vegetated former residential property, to the east by a log yard and to the north by the vegetated buffer along the Southwest Miramichi River.

Refer to aerial photo – Figure 2.

The site has been the location of farm fields and a sawmill since at least 1954, as per the DNR aerial photo.

3.1.2 GEOLOGY

The site is located in an area underlain by Late Carboniferous-aged sedimentary rocks of the Pictou Group, Minto Formation. Bedrock consists of Grey to red, fine to medium-grained sandstone; grey, green and red mudstone; minor, grey and red granule to cobble conglomerate, and traces of coal.

3.1.3 SURFICIAL GEOLOGY

The project site is located adjacent to the Miramichi River, within what may be a former floodplain of the Miramichi River. Soils in the area consist of Holocene aged alluvial sediments – terraces and floodplains, consisting of sand, gravel, some silt, minor clay and organic sediment, generally more than 2m thick deposited as channel, overbank and flood basin deposits at or near the present base level.



Figure 5: 2009 aerial photo of the JDI Doaktown Sawmill (NB DNR).

3.1.4 TOPOGRAPHY

The proposed project site slopes northward towards the Miramichi River. The high point within the PDA is approximately 40.65m above sea level (ASL) at the southwest corner of the proposed new sawmill. The area slopes to approximately 32m ASL at the edge of the riparian buffer, at which point the land drops down to the river's edge at 27.75m ASL.

At present, site runoff is directed to two (2) holding ponds via two (2) catch basins, before discharging into the Miramichi River just above the confluence with Fowler Brook. According to sawmill staff, only the eastern-most pond ever contains water, as water collected in the west pond percolates into the ground before reaching the river.

A ditch is also situated along the length of the riparian buffer, between the sediment ponds, to capture and direct surface water from the rear of the sawmill.

3.1.5 ATMOSPHERIC QUALITY

Doaktown is a rural community located within the Miramichi River Valley. The nearest industrial/urban centres are the cities of Fredericton and Miramichi, located approximately 80 and 90 kms away, respectively. Environment Canada and NB DELG do not provide air quality data specifically for Doaktown; however air quality is assumed to be very good/excellent based on the setting and lack of industrial emissions in the area.

3.1.6 SURFACE WATER

The proposed project is located adjacent to the main branch of the Southwest Miramichi River. The entire Miramichi River watershed is approximately 14,000 km² in size, and of which the Southwest Miramichi drains approximately 7,700 km². The Miramichi River has one of the largest Atlantic salmon runs in Eastern North America, and is also known to contain approximately 9 other diadromous fish species. The Miramichi estuary, located approximately 80 kilometres northeast of Doaktown, is also the habitat for important fish species, including the Blue Back Herring (*Alosa aestivalis*) and Striped Bass (*Morone saxatilis*).

In addition to the Southwest Miramichi River, Fowler Brook is located approximately 75m to the east of the existing sawmill building, originating south of the JD Irving properties.

According to the GeoNB Mapviewer, and as confirmed by a site visit on March 18th, no wetlands are located within 30 metres of the proposed project site (refer to Figure 3).

The project site is not located within, or upstream of, a Designated Surface Water Supply Watershed.



Figure 6: GeoNB Mapview wetland mapping of the proposed site (red).

3.1.7 VEGETATION

The majority of the site is an existing commercial/industrial area, with vegetation primarily located within the riparian zone between the gravel/paved areas and the Miramichi River, and the adjacent lot on the western boundary of the site.

Riparian zone vegetation consists of common, native vegetation including speckled alder (*Alnus rugose*), white birch (*Betula papyrifera*), red maple (*Acer rubrum*), american elm (*Ulmus Americana*), willow (*Salix*) species, red-osier dogwood (*Cornus sericea*), staghorn sumac (*Rhus typhina*), raspberry (*rubus* spp.) and common grass and wildflower species.

Vegetation along the South Road portion of the property is limited to grass (lawn).

The western edge of the site (PID nos. 40049785, 40342263 and 40049777 is the former site of a home, still containing part of an old shed. This area contains vegetation typical of a regenerating field/yard, with grasses and successional shrubs and mature tree species along the property edges, including white pine, balsam fir (*Abies balsamea*), trembling aspen, speckled alder, staghorn sumac, speckled alder, white birch and red maple.

Approximately 1,000 square metres of the western site edge vegetation is anticipated to be removed during site preparation.

3.1.8 ENVIRONMENTALLY SIGNIFICANT AREAS

A request for information related to Environmentally Significant Areas (ESAs) within a 5km radius of the project site was submitted to the NB DELG, and to the Atlantic Canada Conservation Data Centre (ACCDC) for Managed Areas (MAs) including Important Bird Areas (IBAs).

The following ESA was identified within the 5 km radius of the project site:

3.1.7.1 Miramichi River and Estuary ESA #348

The Miramichi River and its tributaries contain the spawning beds of the largest population complex of Atlantic salmon (*Salmo salar*) in North America; it also includes important nursery areas for many other species of juvenile fishes. The river supports significant Gaspereau (*Alosa pseudoharengus*) and Eel spp. fisheries during the spring, summer and fall, and also supports one of the Gulf of St. Lawrence's largest remaining populations of Striped Bass (*Morone saxatilis*). Blue Back Herring (*Alosa aestivalis*) is also found in the lower Miramichi, one of only three (3) such rivers in New Brunswick.

Refer to section 4.2 below.

The following ESAs were identified beyond the 5km radius, but near the project site and therefore were also reviewed in relation to the proposed project:

3.1.7.2 Doaktown Old Growth White Pine Forest ESA #424

This mature, old growth White Pine forest is located approximately 7km east of downtown Doaktown. The site consists of an old growth White Pine forest with a White Pine canopy, sub-canopy of Balsam Fir, and an understory of Beech, Striped Maple, Balsam Fir, and Bracken Fern, and is also notable for heavily decayed cut stumps.

Due to its nature/location/distance, the proposed project is not anticipated to impact this ESA and therefore is not assessed further in this report.

3.1.7.3 Mercury Island ESA #436

Located approximately 12km downstream of the proposed project, this ESA consists of a gravel island with an interesting diversity of plant species, particularly those more common in Southwestern New Brunswick.

Due to its nature and location/distance from the ESA, the proposed project is not anticipated to impact this ESA and therefore is not assessed further in this report.

3.1.9 ARCHAEOLOGICAL AND HERITAGE RESOURCES

The existing Doaktown sawmill was constructed in the 1950's, and purchased by JDI in the late 1980's/early 1990's.

JDI requested Heritage Resource and Archaeological Mapping for the proposed site from the ASU (NB Dept. of Tourism, Heritage and Culture). Based on the location of the PDA in relation to the mapping provided by the ASU for the proposed project site, no archaeological and heritage resources (including Aboriginal resources) are anticipated within the project footprint, and are therefore not assessed further in this report.

As with any project registered for an EIA in New Brunswick, during excavation of the site, should any archaeological resources be discovered, all work will cease and the Archaeological Services Unit (ASU) of the NB Department of Tourism, Heritage and Culture will be contacted immediately.

3.1.10 LAND USE

The subject property for the proposed site consists of a developed commercial/industrial site, and is zoned "Industrial" (IND) as well as "Rural"(RU), with a narrow strip of conservation (C) land adjacent to the Miramichi River. The site is the location of the existing JDI Doaktown Sawmill, and is located on the South Road, a cul-de-sac with 7 houses between Doaktown and the sawmill, and approximately 25 dwellings (camps and homes) beyond the mill.

No heavily populated areas, recreational areas (such as downstream public beaches), or institutional buildings (schools, churches, etc.) are located adjacent to or nearby the existing sawmill.

A salmon pool (the "Mill Pool") is located immediately adjacent to the sawmill site; the JDI Doaktown Sawmill maintains exclusive rights to this pool. It is reserved for angling by the

sawmill employees outside of regular working hours, but public use during mill operating hours is permitted.

The properties located immediately west of the PDA are residences; however, the sawmill has been in operation since the 1950's and operating on two shifts since the late 1980's/early 1990's (two, 10-hour shifts per day).

The proposed project is not anticipated to impact or conflict with land uses in the area and therefore is not assessed further in this report.

3.1.11 GROUNDWATER

A 1000m-radius search of the DELG online well log database (OWLS) identified eight (8) water wells drilled since 1995. According to the well log reports, well depths range between 19.2m to 64.01m with an average depth of 36.04m. Bedrock was identified as grey/brown or brown sandstone (fractured sandstone bedrock aquifer), and water is drawn from depths ranging between approx. 13 and 50m. Well yields ranged from 0 litres/minute (Lpm) to 91.0 Lpm, with an average yield of 51.19 Lpm.

Of four (4) water quality samples analyzed, no significant water quality issues were identified.

The sawmill site PDA contains two wells; both are used for non-potable purposes and will be decommissioned by a licensed well driller during site preparation activities.

The nearest potable water well is located on the adjacent residential property approximately 50m across- and up-gradient of the PDA. No neighbouring potable water wells are located downgradient of the PDA.

Groundwater is anticipated to flow north towards the Miramichi River.

The PDA is not located within or upgradient of a Designated Municipal Wellfield.

The proposed project is not anticipated to impact groundwater resources, and therefore is not assessed further in this report.

3.1.12 MIGRATORY BIRDS

“Under Section 6 of the *Migratory Birds Regulations* (MBR), no person shall disturb, destroy or take a nest or egg of a migratory bird; or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the current MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities. Furthermore, Section 5.1 of the MBCA describes prohibitions related to deposit of substances harmful to migratory birds:

Migratory birds protected by the MBCA include all seabirds except cormorants and pelicans, all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles). Most of these birds are specifically named in the Environment Canada publication, *Birds Protected in Canada under the Migratory Birds Convention Act*, Canadian Wildlife Service Occasional Paper No. 1.

It is the responsibility of the proponent to ensure that activities comply with the MBCA and regulations, and compliance with the *Migratory Birds Convention Act* and associated regulations (MBCA) and the *Species at Risk Act* (SARA) is expected for all project-related activities and during all project phases.

Due to the industrial/commercial nature of the site, and based on the anticipated scheduling of construction and demolition of the sawmill (outside of the bird breeding season), the proposed project is not anticipated to impact or conflict with migratory birds; therefore this will no longer be discussed in this report.

3.1.13 WILDLIFE

The proposed site is located adjacent to Fowler Brook and the main Southwest Miramichi River and their riparian vegetation zones. These areas are potential habitat for riverine aquatic wildlife species, birds inhabiting the riparian buffer areas, and amphibians along the water edges.

However, the PDA is not anticipated to impinge these riparian buffer areas. By avoiding these areas, the proposed project is not anticipated to impact or conflict with wildlife; therefore wildlife impacts will no longer be discussed in this report.

3.1.14 SPECIES AT RISK

Canada's Species at Risk Act (SARA) is one of three major components in the Government of Canada Strategy for the Protection of Species at Risk. It is designed as a key tool for the conservation and protection of Canada's biological diversity and fulfils an important commitment under the United Nations Convention on Biological Diversity. New Brunswick also has a Species at Risk Act, which complements the federal act.

The purpose of SARA is to:

- A. Prevent wildlife species from becoming extinct or extirpated (lost from the wild in Canada);
- B. Help in the recovery of extirpated, endangered or threatened species; and
- C. Ensure that species of special concern do not become endangered or threatened.

A scan of available information was obtained from the Atlantic Canada Conservation Data Centre, which identified potential Species at Risk and protected areas within a 5km radius of the subject site. Refer to Table 1 for the definitions of Wildlife Rarity Rankings, Table 2 for the species identified by ACCDC, and Appendix B for the complete ACCDC report.

Table 1: Wildlife Rarity Ranking Definitions.

Atlantic Canada Conservation Data Centre (ACCDC) S-Rank www.accdc.com/en/rank-definitions.html	
S-RANK DEFINITIONS	
SX	Presumed Extirpated: Species or community is believed to be extirpated from the province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
S1	Critically Imperiled - Critically imperiled in the province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
S2	Imperiled - Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
S3	Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5	Secure - Common, widespread, and abundant in the province.
SNR	Unranked - Nation or state/province conservation status not yet assessed.
SU	Unrankable - Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA	Not Applicable - A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#S#	Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
Not Provided	Species is not known to occur in the province.
BREEDING STATUS QUALIFIERS	
N	Nonbreeding - Conservation status refers to the non-breeding population of the species in the province.
B	Breeding - Conservation status refers to the breeding population of the species in the province.
M	Migrant - Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the province.
?	Inexact or uncertain: Denotes inexact or uncertain numeric rank.
Species at Risk Act (SARA) (Canada and New Brunswick)	
Extirpated	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
Endangered	A wildlife species facing imminent extirpation or extinction.

(E)	
Threatened (T)	A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
Special Concern (SC)	A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.
NBDNR General Status of Wildlife	
<i>At risk</i>	Species for which a formal assessment has been completed, and determined to be at risk of extirpation or extinction. To be described by this category, a species must be either listed as endangered or threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), or the New Brunswick equivalent.
<i>May be at risk</i>	Species or populations that may be at risk of extirpation or extinction, and are therefore candidates for a detailed risk assessment by COSEWIC or the New Brunswick equivalent.
<i>Sensitive</i>	Species which are not believed to be at risk of extirpation or extinction, but which may require special attention or protection to prevent them from becoming at risk.
<i>Secure</i>	Species that are not believed to be at risk, may be at risk, or sensitive. These are generally species that are widespread and/or abundant. Although some secure species may be declining, their level of decline is not felt to be a threat to their status in the province.
COSEWIC	
Extinct	A wildlife species that no longer exists.
Extirpated	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.
Endangered	A wildlife species facing imminent extirpation or extinction.
Threatened	A wildlife species that is likely to become an endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
Special Concern	A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.
Not At Risk (NAR)	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

Table 2 outlines the rare or endangered wildlife species ACCDC identified occurring within a 5km radius of the proposed project site. Table 3 outlines the location sensitive species intersecting the 5km study radius.

Table 2: ACCDC scan results.

*	Scientific Name	Common Name	COSEWIC	SARA	Prov. Legal Protection	Provincial Rarity Rank	Provincial GS Rank	No. Recs.	Dist. (km)
P	<i>Juglans cinerea</i>	Butternut	Endangered	Endangered	Endangered	S1	1 At Risk	3	3.8 ± 1.0
P	<i>Ionactis linartiifolius</i>	Stiff Aster	.	.	.	S2	3 Sensitive	2	2.1 ± 1.0
P	<i>Calypso bulbosa</i> var. <i>Americana</i>	Calypso	.	.	.	S2	2 May Be At Risk	3	4.3 ± 1.0
P	<i>Polygonum scandens</i>	Climbing False Buckwheat	.	.	.	S2	4 Secure	1	4.3 ± 1.0
P	<i>Agrimonia grposepala</i>	Hooked Agrimony	.	.	.	S3	4 Secure	1	4.4 ± 1.0
P	<i>Carex haydenii</i>	Hayden's Sedge	.	.	.	S3	4 Secure	2	2.0±1.0
P	<i>Carex ormostachya</i>	Necklace Spike Sedge	.	.	.	S3	4 Secure	1	0.5±1.0
P	<i>Isoetes tuckermanii</i>	Tuckerman's Quillwort	.	.	.	S3	4 Secure	1	4.3 ± 1.0
A	<i>Hirundo rustica</i>	Barn Swallow	Threatened	.	Threatened	S3B	3 Sensitive	1	2.4±0.0

A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	.	Threatened	S3S4B	3 Sensitive	1	3.5± 0.0
A	<i>Toxostoma rufum</i>	Brown Thrasher	.	.	.	S2B	3 Sensitive	1	1.7± 7.0
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	.	.	.	S3S4B	3 Sensitive	1	1.2± 0.0
I	<i>Gomphus abbreviatus</i>	Spine-crowned Clubtail	.	.	.	S3	4 Secure		4.7± 0.0
I	<i>Ophiogomphus howei</i>	Pygmy Snaketail	Special Concern	Special Concern	Special Concern	S2	2 May Be At risk		1.1± 0.0
I	<i>Nymphalis l-album</i>	Compton Tortoiseshell				S3	4 Secure		0.8± 1.0

Table 3. Location sensitive species within 5 km of site.

LOCATION SENSITIVE SPECIES Known Within 5km of Subject Site					
*	Scientific Name	Common Name	COSEWIC	SARA	Prov. Legal Protection
A	<i>Haliaeetus leucocephalus</i>	Bald Eagle	-	-	Endangered
A	<i>Glyptemus insculpta</i>	Wood Turtle	-	Threatened	Threatened

The construction and operation of any project has the potential to impact birds, mammals and invertebrate species of conservation concern found within a proposed project's footprint, particularly where vegetation is to be removed.

The specific habitat requirements of each of the species of conservation concern identified in Table 2 and 3 were reviewed and compared to the PDA to determine potential interaction with the proposed project. Due to the nature of the site (an existing, developed industrial site and portion of a former residential property), no species at risk-specific habitat was determined to be within the PDA. Based on this analysis, the project is not anticipated to adversely impact Species At Risk and is no longer assessed in this report.

3.1.15 WASTE MANAGEMENT

Waste generally refers to any material, non-hazardous or hazardous, that has no further use, and which is managed at recycling, processing, or disposal sites. In Canada, the responsibility for managing and reducing waste is shared among the federal, provincial, territorial and municipal governments.

The sawmill demolition (and to a lesser extent, the construction) will create construction and demolition waste and hazardous waste in the form of used hydraulic oil and the ceiling tiles mentioned in section 2.6.2. JDI has undertaken similar capital projects on their other sawmills, and have established waste management protocols, which maintain safe and efficient work sites while avoiding or minimizing potential environmental impacts.

Demolition of the existing sawmill building/structures will produce typical C&D waste, including metal and wood waste. C&D waste will be managed by the certified contractor on site, and disposed of at an approved waste disposal or recycling facility.

Construction waste generated by the project is not anticipated to cause adverse environmental effects; therefore it is no longer discussed in this report.

Hazardous waste is addressed in section 4(3).

4. POTENTIAL ENVIRONMENTAL IMPACTS

Based on the project description and the existing environment at the proposed location, the following potential environmental impacts were identified and scoped in the EIA:

- a) Atmospheric Quality;
- b) Surface Water Quality and Aquatic Habitat;
- c) Hazardous Waste, and
- d) Labour and economy.

The following sections outline the potential impacts to each VEC from the construction and operation of the proposed project. Proposed mitigation is outlined in Section 5.

4.1 ATMOSPHERIC QUALITY

Atmospheric emissions assessed include potential air impacts from the demolition of the existing sawmill, and the construction and operation of the new sawmill. Potential impacts primarily consist of dust, noise, and vehicle exhaust from the combustion of diesel fuel.

4.1.1 CONSTRUCTION

Air emissions associated with the construction of the new sawmill may include dust and noise generated by vehicles and construction activities, as well as vehicle/equipment emissions.

Vehicle and equipment emissions during construction and operation are not anticipated to be significant, are temporary and will not involve a significant long-term decrease in the area's air quality.

4.1.2 OPERATION

The primary source of noise at the project site is currently, and will continue to be, the day-to-day operations of the sawmill, including movement of heavy equipment (engines and back-up warning horns) and sawmill equipment not located within the sawmill building.

Operation of the new sawmill is not anticipated to result in an increase in overall noise levels at the site; a net *decrease* in noise is anticipated, due to the fact that the entire sawmill process will be located within the new sawmill building.

Operation of the new sawmill is anticipated to marginally increase biomass boiler emissions from the overall sawmill site, but these will remain within the Approval to Operate allowable limits.

Refer to section 5.1 for mitigation measures relating to atmospheric quality.

4.2 SURFACE WATER QUALITY (& FISH HABITAT)

The proposed project site is located adjacent to the main branch of the Southwest Miramichi River, and a salmon pool known as the “Mill Pool”.

Construction of the proposed new sawmill will include vegetation removal, site excavation and grading, and pouring of concrete foundation within 100m of the River. If not adequately managed, during heavy precipitation events, contaminant or sediment-laden runoff could reach the river and create bank erosion or increased turbidity and total suspended sediment downstream of the proposed site. This could also impact fish habitat through sediment deposition or contamination.

Refer to section 5.2 for mitigation measures relating to surface water quality.

4.3 HAZARDOUS WASTE

The current and new sawmill equipment, such as saws, debarker, and conveyor systems operate using hydraulic systems, and therefore require hydraulic oil for their operation. During decommissioning and commissioning of the sawmill equipment, hydraulic oil will be handled on site: used hydraulic oil will be drained and flushed from the old sawmill equipment, temporarily stored on site (less than 48 hours), and then removed for proper disposal by a licensed carrier. New equipment will require hydraulic oil for initiating, testing and commissioning in the new sawmill; however, the new, modern equipment will be more reliant on electricity and hydraulic oil use will be significantly reduced. Motorized equipment will also require diesel fuel and other petroleum products to operate within the PDA.

JDI also maintains a DELG-approved used oil storage area and a 9,000 litre above-ground diesel storage tank for refueling their motorized equipment.

The storage and use of these products may result in groundwater, soil or surface water contamination in the event of accidental releases/spills.

Refer to section 5.3 for mitigation measures relating to hazardous waste.

4.4 LABOUR AND ECONOMY

At present, the JDI Doaktown sawmill and value-added centre employs approximately 120 people directly, and contributes additional indirect employment to the Miramichi region. The project is anticipated to generate over 100 construction jobs for the duration of the construction and demolition phases of the project.

A negligible decrease in full-time sawmill employment is anticipated for the operation of the new sawmill, due to the higher efficiency of the new equipment; however, this modernization

represents a long-term financial commitment by JDI to the Doaktown region, and is therefore considered a positive project for long-term employment in the region.

Refer to section 5.4 for mitigation measures relating to labour and economy.

5. MITIGATION OF ENVIRONMENTAL IMPACTS

The following sections outline mitigation of potential environmental impacts from the proposed project as outlined in section 4.

5.1 ATMOSPHERIC QUALITY

As noted in section 4.1, the following potential adverse impacts to atmospheric quality may occur as a result of the construction and operation of the project:

- Increased dust during construction, in dry periods;
- Increased noise levels during construction, and
- Increased equipment emissions during construction.

Description of General Mitigation Measures:

1. Vehicles working at the project site will be maintained in good working order and properly muffled.
2. JDI will apply dust suppression during periods of dry weather, as necessary, to roads and the yard to limit the creation of dust. Airborne dust and dirt resulting from the work on site will be kept to a minimum.
3. Construction and demolition activities will be temporary. Hours of construction during this period will be as per current operating hours.
4. The new facility is anticipated to result in a minimal improvement in noise levels at the site, as the majority of the sawmill will be enclosed within the new building.
5. As with the current practice, back-up warnings will be disabled during night shifts.

Based on the mitigation measures proposed above, the project is not anticipated to have permanent significant impacts on atmospheric quality.

5.2 SURFACE WATER QUALITY

As noted in section 4.2, sediment or contaminant-laden surface water runoff may adversely impact the Miramichi River and Mill Pool, adjacent and downstream of the site.

Description of General Mitigation Measures:

1. JDI will employ standard erosion and sediment controls during the construction and demolition phases of the project. These will include, but may not be limited to:

- constructing temporary ditches and sediment ponds; covering exposed/excavated areas or stockpiled material, and installing hay bales, sediment fencing or other measures, as needed;
2. JDI will undertake regular, visual monitoring of the sediment and erosion measures during construction, and more frequently during heavy precipitation events;
 3. JDI will maintain additional equipment on site (hay bales, sediment fences, etc.) for use during emergency situations;
 4. The design of the new facility, once construction is complete, and the demolition of the existing building is completed, will also include a maintaining a permanent, protected (i.e. vegetated) perimeter and if necessary, sediment pond(s) to capture any surface runoff prior to reaching the Southwest Miramichi River;
 5. Exposed areas, such as the yard or driveways, will be covered with asphalt and/or gravel to impede erosion and sediment migration, and
 6. JDI typically creates a Site-Specific Environmental Protection Plan for their construction projects, which outlines standard operational procedures and mitigation measures for issues such as accidents, spills, and erosion control. JDI will design and implement such a SSEPP for the Doaktown Sawmill project, prior to the onset of construction.

Based on the mitigation measures proposed above, the project is not anticipated to have permanent significant impacts on surface water quality or aquatic habitat.

5.3 HAZARDOUS WASTE

As noted in section 4.3, the demolition of the existing sawmill and the commissioning of the new sawmill will require the use and storage of petroleum products, primarily hydraulic oils. . Furthermore, JDI maintains a used-oil storage site, as well as a 9000L diesel above-ground storage tank for their motorized equipment.

Additionally, ACM has been confirmed in the ceiling tiles of the sawmill building

Description of General Mitigation Measures:

1. All petroleum storage tanks (and designated storage areas) are licensed by the Department of Environment and Local Government and meet the applicable legislation, Approvals and Guidelines;
2. All used oil and petroleum containers are stored within impermeable secondary containment;
3. Spill kits are maintained on site in the event of an unplanned accident or spill;
4. Used oil is removed from the site by a licensed used oil carrier;
5. JDI will employ a certified contractor using Asbestos Work Procedures as defined by *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick* (NB Regulation 92-106), and
6. All hazardous materials will be properly disposed of at an approved disposal facility.

Based on the mitigation measures proposed above, the project is not anticipated to have permanent significant impacts on the environment from the generation or storage of hazardous waste.

5.4 LABOUR AND ECONOMY

The proposed sawmill demolition and construction project is anticipated to create approximately 100 direct and indirect construction jobs during the period of construction.

A negligible decrease in full-time sawmill employment (unknown at this time) is anticipated for the operation of the new sawmill, due to the higher efficiency of the new equipment.

This reduction in sawmill positions is anticipated to be addressed through various means, including retirement/attrition, typical position turnover, or relocation/transfer of employees to other JDI operations.

Additionally, the long-term viability of the Doaktown Sawmill will increase by increasing the profitability of the sawmill, resulting in long-term employment opportunities for the Doaktown area.

In summary, the project is anticipated to have a positive impact on construction employment in the Doaktown area, despite a net loss of full-time employment positions. Additionally, the potential for long-term employment in the Doaktown area will be significantly improved.

6. CUMULATIVE EFFECTS

Cumulative effects are “changes to the environment that are caused by an action in combination with other past, present and future human actions”. Cumulative effects can appear to be minor effects when assessed individually, but when examined within a larger spatial context, “can pose a serious threat to the environment and result in the degradation of important resources”.

This report assesses the potential cumulative effects of the proposed project, primarily from an air quality impacts perspective. This analysis considers the temporary nature of the air impacts from the construction of the sawmill, and the negligible increase in production of air quality parameters at the entire sawmill complex.

The proposed project is a replacement of an existing sawmill with a new, modern and more efficient sawmill. The lumber output of the proposed new sawmill will increase from 27 million FBM/annum to 30 million FBM/annum, without requiring additional volumes of pine logs. Furthermore, negligible (1% overall) increases in emissions from trucking and the biomass boiler are anticipated.

At the local scale, no air quality-related complaints have been received with the exception of a single complaint regarding smoke in 2008. Based on the annual air reports, air emissions have met, and remained significantly below, the air quality limits set out in the Approval to Operate. (Emilie Tremblay, DELG, pers. comm.). No other air quality issues are known for the Doaktown area.

In essence, the proposed project represents a status quo of the current air quality emissions of the site, in an area with no other air quality industrial emitters. Furthermore, no future industrial emissions can reasonably be foreseen for the near future.

Based on the mitigation measures noted in section 5 above, and the projected air emissions remaining at or near existing levels, cumulative effects of this project are considered not likely and not significant.

7. MITIGATION SUMMARY AND SIGNIFICANCE OF IMPACTS

Refer to Table 3 for a summary of Valued Environmental Components, mitigation measures and significance.

Significance of residual impacts rated as follows:

0=None, 1=Not Likely/ Not Significant, 2=Likely/Significant, 3=Unknown, + =Positive,

- =Negative

Table 3: Summary of mitigation measures and residual effects.

Valued Ecosystem/ Social Component (VEC/VSC)	Description of Potential Project Interaction with VEC/VSC	Mitigation	Residual Effects		Further Study or Follow-up
			Likelihood	Significance	
Atmospheric Quality	<ul style="list-style-type: none"> • Increased dust during construction, in dry periods; • Increased noise levels during construction, operation, and • Increased equipment emissions during construction. 	<ol style="list-style-type: none"> 1. Vehicles working at the project site will be maintained in good working order and properly muffled. 2. JDI will apply dust suppression during periods of dry weather, as necessary, to roads and the yard to limit the creation of dust. Airborne dust and dirt resulting from the work on site will be kept to a minimum. 3. Construction activities will be temporary until construction and demolition activities are complete; 4. Hours of construction will be as per current operating hours; 5. Following construction of the building, access roads will be surfaced to limit dust emissions. 	1	1	0

		<p>6. The new facility is anticipated to result in an improvement in noise levels at the site, as the sawmill will be enclosed within the new building.</p> <p>7. As with the current practice, back-up warnings will be disabled during night shifts.</p>			
Surface Water Quality	<p>Sediment or contaminant-laden surface water runoff may adversely impact the Miramichi River and Mill Pool, adjacent and downstream of the site.</p>	<p>1. JDI will employ standard erosion and sediment controls during the construction and demolition phases of the project. These will include, but may not be limited to: constructing temporary ditches and sediment ponds; covering exposed/excavated areas or stockpiled material, and installing hay bales, sediment fencing or other measures, as needed;</p> <p>2. JDI will undertake regular, visual monitoring of the sediment and erosion measures during construction, and more frequently during heavy precipitation events;</p> <p>3. JDI will maintain additional equipment on site (hay bales, sediment fences, etc.) for use during emergency situations;</p> <p>4. The design of the new facility, once construction is complete, and the demolition of the existing building is completed, will include a permanent perimeter ditch and if necessary, sediment pond(s) to</p>	1	1	0

		<p>capture any surface runoff prior to reaching the Miramichi River;</p> <ol style="list-style-type: none"> 5. All exposed areas, such as the yard or driveways, will be covered with asphalt and/or gravel to impede erosion and sediment migration, and 6. JDI typically creates a Site-Specific Environmental Protection Plan for their construction projects, which outlines standard operational procedures and mitigation measures for issues such as accidents, spills, and erosion control. JDI will design and implement such a SSEPP for the Doaktown Sawmill project, prior to the onset of construction. 			
Hazardous Waste	<p>The demolition of the existing sawmill and the commissioning of the new sawmill, will require the use and storage of petroleum products, primarily hydraulic oils. Furthermore, JDI maintains a used-oil storage site, as well as a 9000L diesel above-ground storage tank for their motorized equipment. Additionally, ACMs are confirmed in the sawmill ceiling tiles.</p>	<ol style="list-style-type: none"> 1. All petroleum storage tanks (and designated storage areas) are licensed by the Department of Environment and Local Government and meet the applicable legislation, Approvals and Guidelines; 2. All used oil and petroleum containers are stored within impermeable secondary containment; 3. Spill kits are maintained on site in the event of an unplanned accident or spill; 4. Used oil is removed from the site by a licensed used oil carrier; 5. JDI will employ a certified contractor using Asbestos Work Procedures as defined by 	1	1	0

		<i>A Code of Practice for Working with Materials Containing Asbestos in New Brunswick</i> (NB Regulation 92-106), and 6. All hazardous materials will be properly disposed of at an approved disposal facility.			
Labour & Economy	The proposed project will create long-term positive economic impacts in the Miramichi region by increasing profitability of the sawmill.	No mitigation required.	+1	+1	0

8. PUBLIC INVOLVEMENT PROGRAM

As per the DELG publication *A Guide to Environmental Impact Assessment in New Brunswick*, “Open and transparent public involvement is required for all registered projects. In order to fulfill the requirements of Section 6(1) of the EIA Regulation, the proponent must demonstrate that the affected public and other stakeholders have been given the opportunity to become involved in reviewing the project, and must indicate how the proponent has considered or addressed any resultant questions and concerns. The opportunity for public involvement benefits citizens most when they take an active role at an early stage in the process, and clearly articulate their specific questions or concerns”.

JDI will submit a proposed Stakeholder Involvement Program strategy to the DELG,. Upon registration of the EIA Registration Document, JDI will initiate the program as per Schedule C of the *Guide*, items 1-4 and 8. This Stakeholder Involvement Program will include the following components:

1. JDI will communicate directly with elected officials (i.e. the MLA and mayor), local service districts, community groups, environmental groups, and other key stakeholder groups;
2. JDI will provide direct, written notification (letter, information flyer, etc.) about the project and its location to potentially affected area residents and landowners;
3. The Sustainable Development, Planning and Impact Evaluation Branch, Department of Environment and Local Government (DELG) shall place notice of the Registration on its web site at <http://www.gnb.ca/0009/0377/0002/0016-e.pdf> and shall make the Registration Document (and any subsequent submissions in response to issues raised by

- the Technical Review Committee) available for public review at 20 McGloin Street, 2nd Floor, Fredericton, NB;
4. JDI will make copies of the project registration document, (and any subsequent submissions in response to issues raised by the Technical Review Committee) available to any interested member of the public, stakeholder or First Nation and shall deposit a copy of this Department of Environment and Local Government 2012-04-01 xxxix document along with any subsequent revision with the appropriate DELG regional office, where it will be available for public review;
 5. The proponent shall place public notice(s) in at least one local newspaper having general circulation in the area of the proposed project and/or at least one provincial daily newspaper, and
 8. Within 60 days of project registration, JDI will prepare and submit to the DELG a report documenting the above public involvement activities, and shall make this report available for public review.

9. APPROVAL OF THE UNDERTAKING

9.1 PROVINCIAL

The project requires a Certificate of Determination as per Section 5(1) of the *Environmental Impact Assessment Regulation - Clean Environment Act*, as well as an Approval to Operate – *Air Quality and Water Quality Regulations*.

Additionally, JDI will obtain a municipal building permit required from the Village of Doaktown through the Greater Miramichi Regional Service Commission.

9.2 FEDERAL

No federal funding or federal legislative mandate is implicated in the proposed project; as such, no federal approval is required.

10. FUNDING

This project is being privately funded.

11. REFERENCES

- Atlantic Canada Conservation Data Centre. *Data Report 5531: Doaktown Sawmill, NB*. Prepared by James Churchill, Data Manager. 18 March 2016.
- Cornell Lab of Ornithology. Cornell University. www.allaboutbirds.org.
- Environment Canada. Species at Risk Registry. www.registrelep-sararegistry.gc.ca . Government of Canada.
- Farrar, John Laird. *Trees in Canada*. P. 198-199. Fitzhenry & Whiteside Limited and the Canadian Forest Service. 1995.
- Lotts, Kelly and Thomas Naberhaus, coordinators. 2015. *Butterflies and Moths of North America*. <http://www.butterfliesandmoths.org/>
- Massachusetts Division of Fisheries and Wildlife. Natural Heritage and Endangered Species Program. *Spine-crowned Clubtail Fact Sheet*. Updated 2015.
- New England Wildflower Society. www.gobotany.newenglandwild.org. 2011-2016.
- New Brunswick. Regulation 87-83. *Environmental Impact Assessment Regulation – Clean Environment Act*. O.C. 87-558. Filed June 30, 1987.
- New Brunswick. Regulation 2002-19. *Used Oil Regulation – Clean Environment Act*. O.C. 2002-95.
- New Brunswick. *A Guide to Environmental Impact Assessment in New Brunswick*. NB Department of Environment and Local Government. April, 2012.
- New Brunswick. Air Quality Monitoring Results 2012 & 2013. NB Department of Environment and Local Government. Environmental Reporting Series. 2015.
- Newcomb, Lawrence. *Newcomb's Wildflower Guide*. Little, Brown and Co. 1977.
- Rampton, V.N. Generalized Surficial Geology Map of New Brunswick. Department of Natural Resources and Energy. Minerals, Policy and Planning Division. NR-8 (scale 1:500,000). 1984.
- Smith, F. A. and Fyffe, L.R. (compilers). *Bedrock Geology of the Doaktown Area (NTS 21 J/09), Northumberland County, New Brunswick*. New Brunswick Department of Natural Resources. Minerals, Policy and Planning Division. Plate 2006-10. 2006.

APPENDICES

- Appendix A: Site Photos
- Appendix B: ACCDC Information
- Appendix C: Approval to Operate

APPENDIX A

SITE PHOTOS AND AERIAL PHOTOS



Photo 1. NB DNR 1954 aerial photo (sawmill site in red).

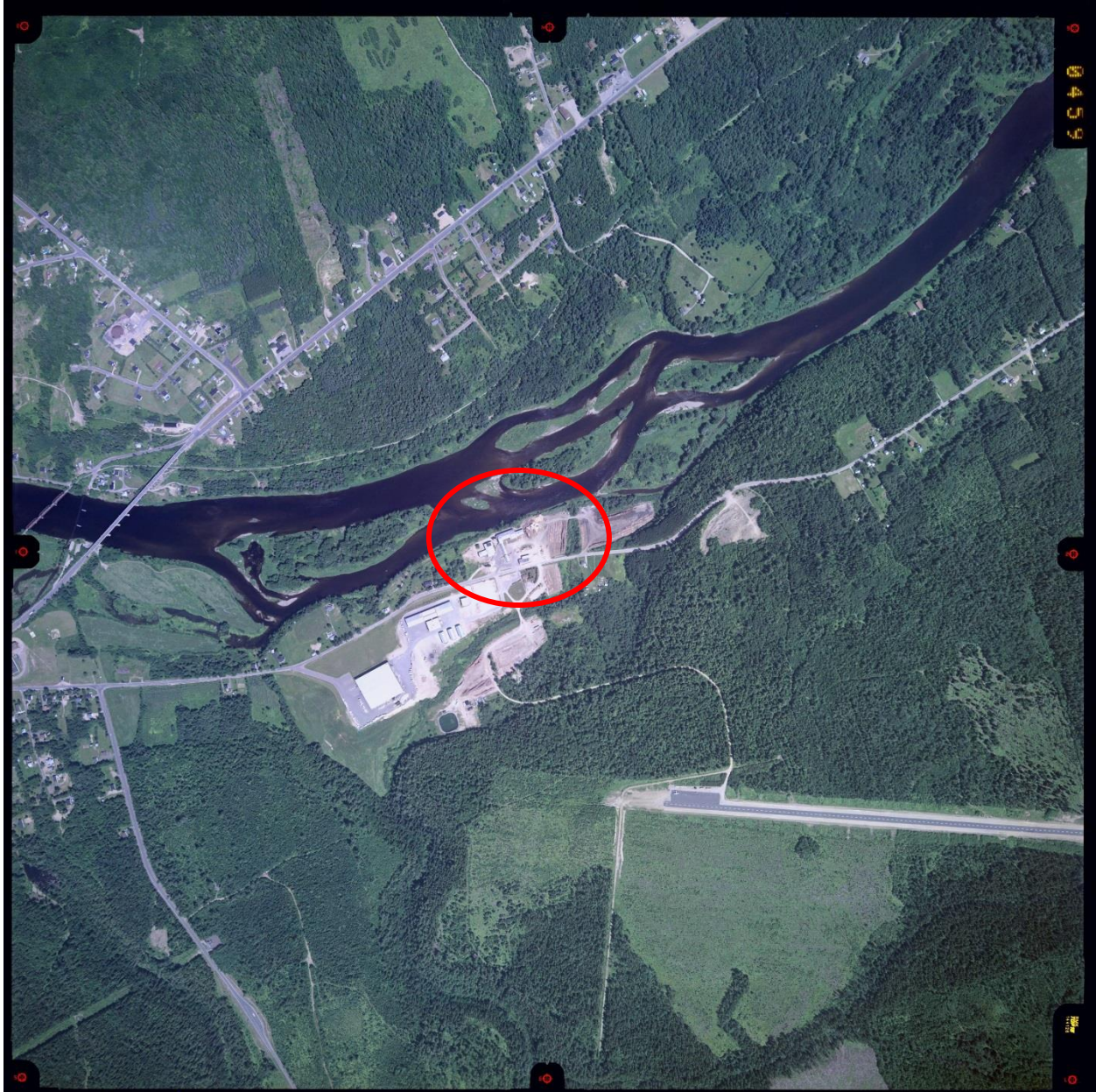


Photo 2. NB DNR 2009 aerial photo.



Photo 3. Sawmill looking northeast from South Road.



Photo 4. Rear of sawmill building looking east along Miramichi River.



Photo 5. Sawmill structure looking north from yard.



Photo 6. Sawmill sorter / stacker area, looking west towards South Road.



Photo 7. Petroleum Above-Ground Storage Tank (AST)



Photo 8. Used oil storage area.



Photo 9. Exterior metal cladding on sawmill building.



Photo 10. Exterior brick wall and concrete foundation of sawmill building.



Photo 11. Sawmill interior – roof of lower level/upper level floor (wood).



Photo 12. Sawmill interior – concrete floor, sawmill lower level.



Photo 13. Sawmill interior lower level – debarker.

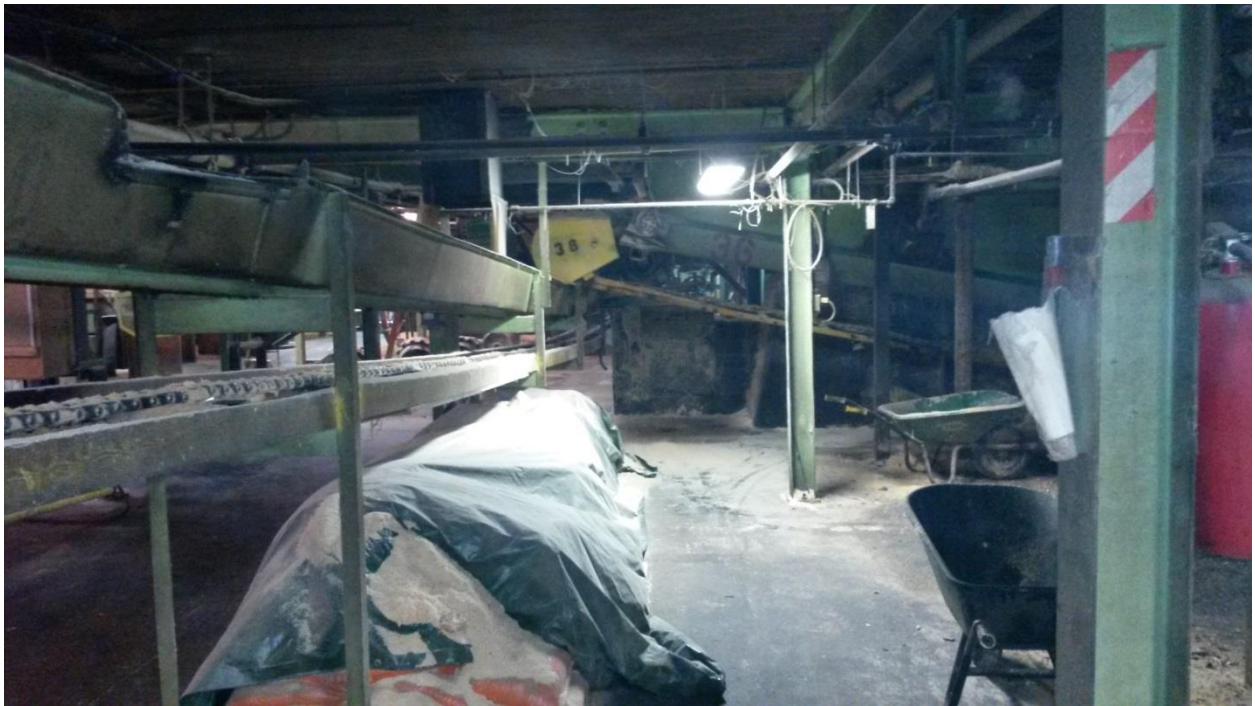


Photo 14. Sawmill interior – lower level.



Photo 15. Sawmill interior, upper level.



Photo 16. Sawmill interior, upper level.



Photo 17. Exterior sorter/stacker area.



Photo 18. Adjacent parcel, property ID no. 40049777.

APPENDIX B
ACCDC REPORT



DATA REPORT 5531: Doaktown, NB

Prepared 18 March 2016
by J. Churchill, Data Manager

CONTENTS OF REPORT

1.0 Preface

- 1.1 Data List
- 1.2 Restrictions
- 1.3 Additional Information
- Map 1: Buffered Study Area

2.0 Rare and Endangered Species

- 2.1 Flora
- 2.2 Fauna
- Map 2: Flora and Fauna

3.0 Special Areas

- 3.1 Managed Areas
- 3.2 Significant Areas
- Map 3: Special Areas

4.0 Rare Species Lists

- 4.1 Fauna
- 4.2 Flora
- 4.3 Location Sensitive Species
- 4.4 Source Bibliography

5.0 Rare Species within 100 km

- 5.1 Source Bibliography



Map 1. A 100 km buffer around the study area

1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) is part of a network of NatureServe data centres and heritage programs serving 50 states in the U.S.A, 10 provinces and 1 territory in Canada, plus several Central and South American countries. The NatureServe network is more than 30 years old and shares a common conservation data methodology. The ACCDC was founded in 1997, and maintains data for the jurisdictions of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. Although a non-governmental agency, the ACCDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees. URL: www.ACCDC.com.

Upon request and for a fee, the ACCDC queries its database and produces customized reports of the rare and endangered flora and fauna known to occur in or near a specified study area. As a supplement to that data, the ACCDC includes locations of managed areas with some level of protection, and known sites of ecological interest or sensitivity.

1.1 DATA LIST

Included datasets:

Filename	Contents
DoaktownNB_5531ob.xls	All Rare and legally protected <i>Flora and Fauna</i> within 5 km of your study area
DoaktownNB_5531ob100km.xls	A list of Rare and legally protected <i>Flora and Fauna</i> within 100 km of your study area
DoaktownNB_5531ff.xls	Rare and common <i>Freshwater Fish</i> in your study area (DFO database)
DoaktownNB_5531sa.xls	All <i>Significant Natural Areas</i> in your study area

1.2 RESTRICTIONS

The ACCDC makes a strong effort to verify the accuracy of all the data that it manages, but it shall not be held responsible for any inaccuracies in data that it provides. By accepting ACCDC data, recipients assent to the following limits of use:

- a) Data is restricted to use by trained personnel who are sensitive to landowner interests and to potential threats to rare and/or endangered flora and fauna posed by the information provided.
- b) Data is restricted to use by the specified Data User; any third party requiring data must make its own data request.
- c) The ACCDC requires Data Users to cease using and delete data 12 months after receipt, and to make a new request for updated data if necessary at that time.
- d) ACCDC data responses are restricted to the data in our Data System at the time of the data request.
- e) Each record has an estimate of locational uncertainty, which must be referenced in order to understand the record's relevance to a particular location. Please see attached Data Dictionary for details.
- f) ACCDC data responses are not to be construed as exhaustive inventories of taxa in an area.
- g) The absence of a taxon cannot be inferred by its absence in an ACCDC data response.

1.3 ADDITIONAL INFORMATION

The attached file DataDictionary 2.1.pdf provides metadata for the data provided.

Please direct any additional questions about ACCDC data to the following individuals:

Plants, Lichens, Ranking Methods, All other Inquiries

Sean Blaney, Senior Scientist, Executive Director

Tel: (506) 364-2658

sblaney@mta.ca

Animals (Fauna)

John Klymko, Zoologist

Tel: (506) 364-2660

jklymko@mta.ca

Plant Communities

Sarah Robinson, Community Ecologist

Tel: (506) 364-2664

srobinson@mta.ca

Data Management, GIS

James Churchill, Data Manager

Tel: (902) 679-6146

jlchurchill@mta.ca

Billing

Jean Breau

Tel: (506) 364-2657

jrbreau@mta.ca

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (506) 364-2658, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Stewart Lusk, Natural Resources: (506) 453-7110.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

Western: Duncan Bayne

(902) 648-3536

baynedz@gov.ns.ca

Western: Donald Sam

(902) 634-7525

samdx@gov.ns.ca

Central: Shavonne Meyer

(902) 893-6353

meyersj@gov.ns.ca

Central: Kimberly George

(902) 893-5630

georgeka@gov.ns.ca

Eastern: Mark Pulsifer

(902) 863-7523

pulsifmd@gov.ns.ca

Eastern: Donald Anderson

(902) 295-3949

andersdg@gov.ns.ca

Eastern: Terry Power

(902) 563-3370

powertd@gov.ns.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Garry Gregory, PEI Dept. of Communities, Land and Environment: (902) 569-7595.

2.0 RARE AND ENDANGERED SPECIES

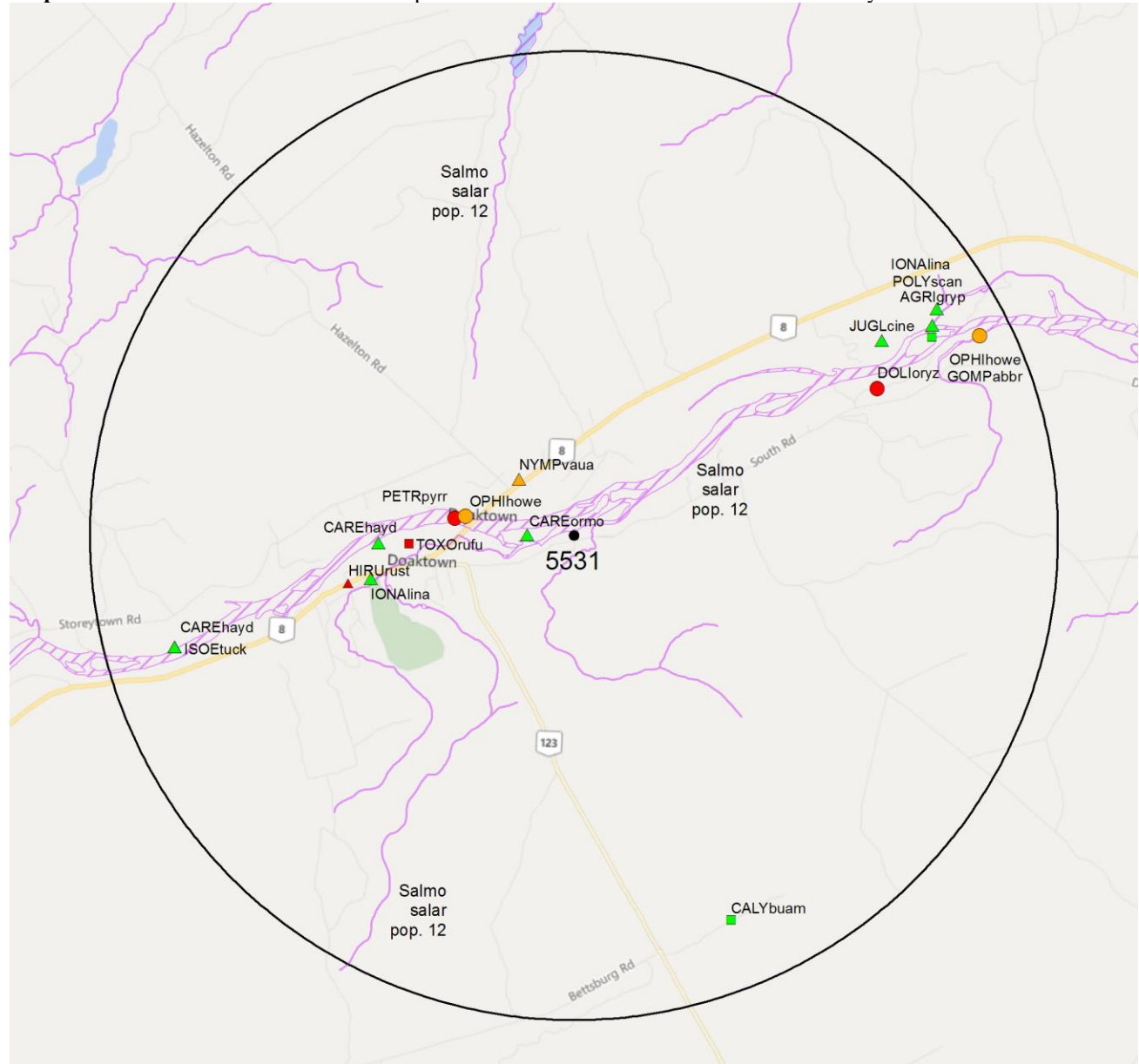
2.1 FLORA

A 5 km buffer around the study area contains 14 records of 8 vascular, no records of nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

A 5 km buffer around the study area contains 5 records of 4 vertebrate, 4 records of 3 invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within 5 km of the study area.



RESOLUTION

- 4.7 within 50s of kilometers
- 4.0 within 10s of kilometers
- 3.7 within 5s of kilometers
- △ 3.0 within kilometers
- △ 2.7 within 500s of meters
- ◇ 2.0 within 100s of meters
- ◇ 1.7 within 10s of meters

HIGHER TAXON

- vertebrate fauna
- invertebrate fauna
- vascular flora
- nonvascular flora

3.0 SPECIAL AREAS

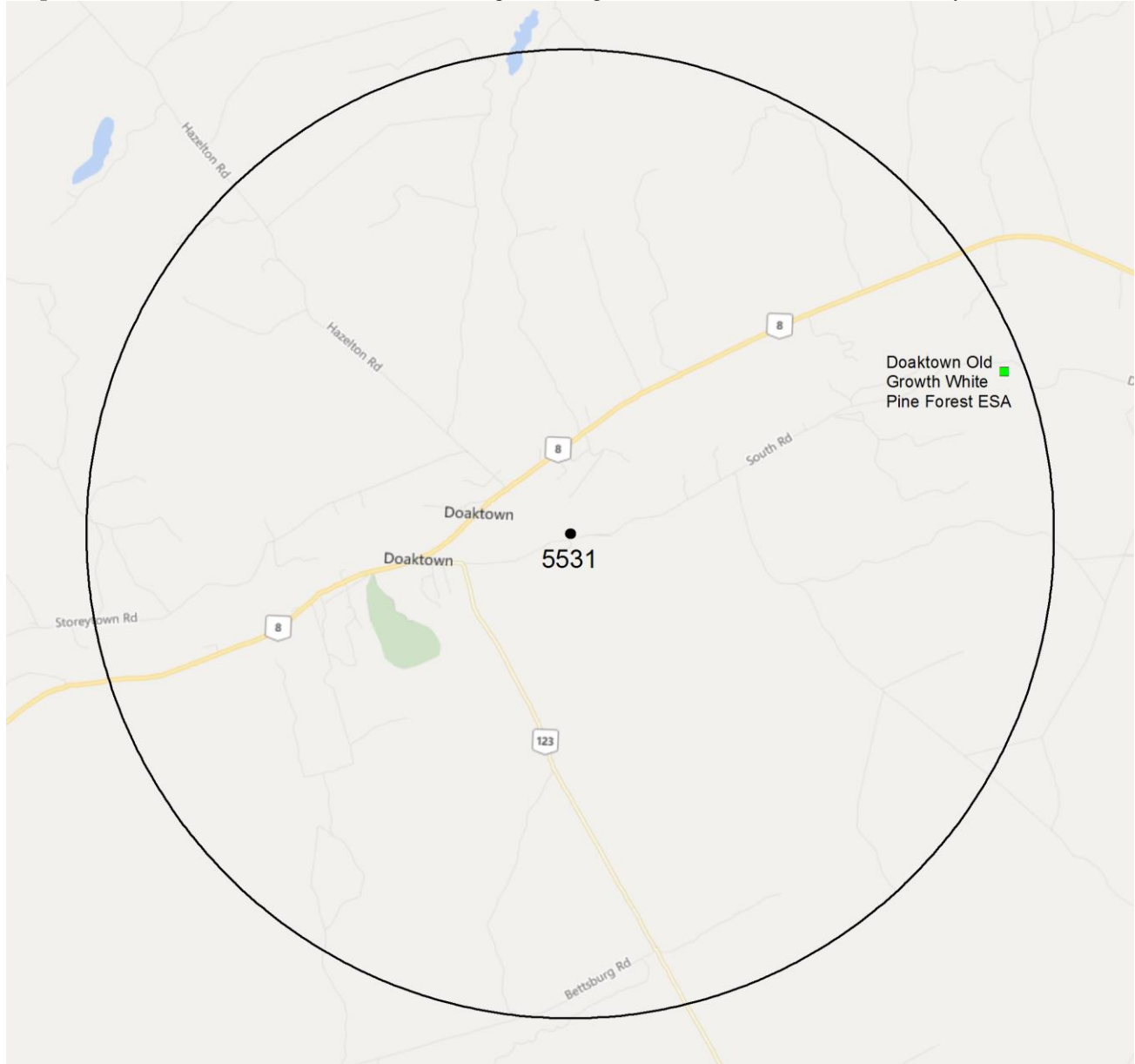
3.1 MANAGED AREAS

The GIS scan identified no managed areas in the vicinity of the study area (Map 3)






3.2 SIGNIFICANT AREAS

The GIS scan identified 1 biologically significant site in the vicinity of the study area (Map 3 and attached file: *sa*.xls)

Map 3: Boundaries and/or locations of known Managed and Significant Areas within 5 km of the study area.



MANAGED AREAS SIGNIFIGANT AREAS

-  boundary
-  boundary
-  approximate
-  approximate
-  point location

NATIONAL DEFENSE FIRST NATIONS

-  boundary
-  boundary
-  approximate
-  approximate
-  point location

4.0 RARE SPECIES LISTS

Rare and/or endangered taxa (excluding “location-sensitive” species, section 4.3) within the 5 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (\pm the precision, in km, of the record). [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community. Note: records are from attached files *ob.xls/*ob.shp only.

4.1 FLORA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Juglans cinerea</i>	Butternut	Endangered	Endangered	Endangered	S1	1 At Risk	3	3.8 \pm 1.0
P	<i>Ionactis linariifolius</i>	Stiff Aster				S2	3 Sensitive	2	2.1 \pm 1.0
P	<i>Calypso bulbosa var. americana</i>	Calypso				S2	2 May Be At Risk	3	4.3 \pm 100.0
P	<i>Polygonum scandens</i>	Climbing False Buckwheat				S3	4 Secure	1	4.3 \pm 1.0
P	<i>Agrimonia gryposepala</i>	Hooked Agrimony				S3	4 Secure	1	4.4 \pm 1.0
P	<i>Carex haydenii</i>	Hayden's Sedge				S3	4 Secure	2	2.0 \pm 1.0
P	<i>Carex ormostachya</i>	Necklace Spike Sedge				S3	4 Secure	1	0.5 \pm 1.0
P	<i>Isoetes tuckermanii</i>	Tuckerman's Quillwort				S3	4 Secure	1	4.3 \pm 1.0

4.2 FAUNA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	<i>Hirundo rustica</i>	Barn Swallow	Threatened		Threatened	S3B	3 Sensitive	2	2.4 \pm 0.0
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened		Threatened	S3S4B	3 Sensitive	1	3.5 \pm 0.0
A	<i>Toxostoma rufum</i>	Brown Thrasher				S2B	3 Sensitive	1	1.7 \pm 7.0
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S3S4B	3 Sensitive	1	1.2 \pm 0.0
I	<i>Gomphus abbreviatus</i>	Spine-crowned Clubtail				S3	4 Secure	1	4.7 \pm 0.0
I	<i>Ophiogomphus howei</i>	Pygmy Snaketail	Special Concern	Special Concern	Special Concern	S2	2 May Be At Risk	2	1.1 \pm 0.0
I	<i>Nymphalis l-album</i>	Compton Tortoiseshell				S3	4 Secure	1	0.8 \pm 1.0

4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species “location sensitive”. Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting a 5 km buffer of your study area are indicated below with “YES”.

New Brunswick

Scientific Name	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
<i>Chrysemys picta picta</i>	Eastern Painted Turtle			No
<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	No
<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	YES
<i>Haliaeetus leucocephalus</i>	Bald Eagle		Endangered	YES
<i>Falco peregrinus pop. 1</i>	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Endangered	No
<i>Cicindela marginipennis</i>	Cobblestone Tiger Beetle	Endangered	Endangered	No
<i>Coenonympha nipisiquit</i>	Maritime Ringlet	Endangered	Endangered	No
<i>Bat Hibernaculum</i>		[Endangered] ¹	[Endangered] ¹	No

¹ *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the Federal Species at Risk Act and the NB Species at Risk Act.

Appendix C: Approval to Operate



APPROVAL TO OPERATE

I-8372

Pursuant to paragraph 5 (3) (a) of the *Air Quality Regulation - Clean Air Act*, and paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act*, this Approval to Operate is hereby issued to:

J. D. IRVING, LIMITED
for the operation of the
Doaktown Sawmill and Value-Added Centre

Description of Source: **Sawmill**

Source Classification: **Air Quality Regulation Class 2**
Fees for Industrial Approvals Class 4
Regulation - Clean Water Act

Parcel Identifier: **40435596, 40436271, 40436230, 40049785, 40342263,
40409666, 40049801, 40409658, 40436263, 40349052**


Mailing Address: **200 South Road
Doaktown, NB E9C 1H4**


Conditions of Approval: **See attached Schedule "A" of this Approval**

Supersedes Approval: **I-6320**

Valid From: **June 20, 2013**

Valid To: **June 19, 2018**

Recommended by: 
Community Planning & Environmental Protection Division

Issued by:  June 3, 2013
Minister of Environment and Local Government Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

J.D. IRVING, LIMITED operates the Doaktown Sawmill and Value-Added Centre, which produces approximately 30 million board feet of white pine lumber per year. In general, the facility consists of a log storage and watering yard, a sawmill, a planer mill, 5 dry kilns, a wood waste boiler, a value-added facility, and petroleum storage tanks.

The potential environmental impacts associated with the operation of a Lumber and Allied Wood Products Manufacturing Facility include, but are not limited to: i) the discharge of site drainage water and process water to the environment from the operation; ii) the release of exhaust gas and/or process gas to the environment from the operation; iii) the release of fugitive dust to the environment from the operation; iv) the improper management of petroleum products and/or chemicals used in the operation; v) the improper management of solid wastes generated from the operation; and vi) the release of nuisance emissions (odourous compounds and/or noise) from the operation.

The operation of the J. D. IRVING, LIMITED Lumber and Allied Wood Product Manufacturing Facility in Doaktown, County of Northumberland and the Province of New Brunswick, and identified as Parcel Identifiers (PIDs) Numbers 40436271, 40436230, 40049785, 40342263, 40409666, 40049801, 40409658, 40435596, 40436263, and 40349052 is hereby approved **subject to the following conditions:**

B. DEFINITIONS

1. **"Approval Holder"** means J. D. IRVING, LIMITED.
2. **"Department"** means the New Brunswick Department of Environment and Local Government.
3. **"Minister"** means the Minister of Environment and Local Government and includes any person designated to act on the Minister's behalf.
4. **"Director"** means the Director of the Impact Management Branch of the Department of Environment and Local Government and includes any person designated to act on the Director's behalf.
5. **"Inspector"** means an Inspector designated under the *Clean Air Act*, the *Clean Environment Act*, or the *Clean Water Act*.
6. **"Facility"** means the property, buildings, and equipment as identified in the Description of Source above, and all contiguous property in the title and/or in the control of the Approval Holder at that location.

7. **"after hours"** means the hours when the Department's offices are closed. These include statutory holidays, weekends, and the hours before 8:15 a.m. and after 4:30 p.m. from Monday to Friday.
8. **"normal business hours"** means the hours when the Department's offices are open. These include the period between 8:15 a.m. and 4:30 p.m. from Monday to Friday excluding statutory holidays.
9. **"environmental emergency"** means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.
10. **"used oil"** means oil that has become unsuitable for its original purpose because of the presence of impurities or the loss of its original properties.
11. **"self-generated used oil"** means used oil generated in the cause of operating one's own business.

C. TERMS AND CONDITIONS

GENERAL

12. The Approval Holder shall operate the Facility in compliance with the *Air Quality Regulation 97-133* filed under the *Clean Air Act*, and/or the *Water Quality Regulation 82-126* filed under the *Clean Environment Act* of the Province of New Brunswick. Violation of this Approval or any term and/or condition stated herein constitutes a violation of the *Clean Air Act* or the *Clean Environment Act*, as the case may be.
13. The issuance of this Approval does not relieve the Approval Holder from compliance with other by-laws, federal or provincial acts or regulations, or any guidelines issued pursuant to regulations.
14. The terms and conditions of this Approval are severable. If any term and/or condition of this Approval is held invalid, is revoked or is modified, the remainder of the Approval shall not be affected.
15. This Facility has been classified as a **Class 2** Facility, pursuant to the *Air Quality Regulation 97-133* filed under the *Clean Air Act*. The Approval Holder shall pay the appropriate fee **on or before April 1 of each year**.
16. This Facility has been classified as a **Class 4** Facility, pursuant to the *Fees for Industrial Approvals Regulation 93-201* filed under the *Clean Water Act*. The Approval Holder shall pay the appropriate fee **on or before April 1 of each year**.

17. An Inspector, at any reasonable time, has the authority to inspect the Facility and carry out such duties as defined in the *Clean Air Act*, the *Clean Environment Act* and/or the *Clean Water Act*.
18. The Approval Holder shall make application in writing, on a form provided by the Minister, for approval to undertake any modification to the Facility that would significantly change the current composition and/or quantity of contaminants being discharged to the environment. The Minister must receive such application **at least ninety (90) days prior** to the planned modification commencement.
19. **Prior to March 20, 2018**, the Approval Holder shall make application in writing for a renewal of this Approval on a form provided by the Minister.
20. The Approval Holder shall ensure that a copy of this Approval, including all attached Schedules, is posted in a prominent location in the office or working area of the Facility.
21. In the event of facility closure, the Approval Holder shall notify the Minister in writing **at least ninety (90) days prior** to the anticipated closure date.

EMERGENCY REPORTING

22. Immediately following the discovery of an environmental emergency, a designate representing the Approval Holder shall notify the Department in the following manner:

During normal business hours, telephone the Department's applicable Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide all information known about the environmental emergency. The telephone number for the Regional Office is provided below:

Miramichi Regional Office (506) 778-6032

After hours, telephone the Canadian Coast Guard **until personal contact is made** and provide all information known about the environmental emergency. The telephone number for the **Canadian Coast Guard is 1-800-565-1633**.

23. Within 24-hours of the time of initial notification, a copy of a **Preliminary Emergency Report** shall be faxed by a designate representing the Approval Holder to the Department's applicable Regional Office *as well as* the Department's Central Office using the fax numbers provided below. The Preliminary Emergency Report shall clearly communicate all information available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, a copy of a **Detailed Emergency Report** shall be faxed by a designate representing the Approval Holder to the Department's applicable Regional Office *as well as* the Department's Central Office using the fax numbers provided below. The Detailed Emergency Report shall include, as a minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

Miramichi Regional Office Fax No: (506) 778-6796
Central Office Fax No: (506) 457-7805

LIMITS

24. The Approval Holder shall ensure that emissions resulting from the operation of the Facility are controlled to prevent the exceedance of the maximum ground level concentrations outlined in the *Air Quality Regulation 97-133*, filed under the *Clean Air Act* of the Province of New Brunswick.
25. The Approval Holder shall ensure that odour, dust, noise, or site run-off being released or discharged from the Facility does not cause adverse impacts to any off-site receptor. In the event impacts are suspected by the Department to be adversely impacting any off-site receptor, the Approval Holder may be required to investigate the degree of impact and/or develop, submit, and implement a Prevention and Control Plan in accordance with a timetable established by the Department. The plan shall be submitted in writing to the Department for review and approval prior to implementation.
26. The Approval Holder shall ensure that smoke emissions do not exceed density Number 1, except for a period totaling not more than four (4) minutes each half hour where smoke may exceed density Number 1 but not exceeding density Number 2 as determined by the Smoke Density Chart of the Province of New Brunswick for normal operation of the Facility. In the case of a new fire, smoke may exceed density Number 2 but may not exceed density Number 3 for a period of three (3) minutes in each quarter hour period.
27. The Approval Holder shall ensure that total emissions of Particulate Matter (PM) from the operation of the facility's boiler(s) do not exceed **20** metric tonnes per calendar year.
28. The Approval Holder shall ensure total emissions of Nitrogen Oxides (NO_x) from the operation of the facility's boiler(s) do not exceed **39** metric tonnes per calendar year.
29. The Approval Holder shall ensure that the site is designed, constructed and operated in such a manner as to control water run-off from the site and ensure that silt does not enter any watercourse.

30. The Approval Holder shall operate the sawmill such that the sound pressure level, measured in decibels (dBA) for the 1 hour equivalent sound limit (Leq), at any residential receptor is less than 65 dBA from 07:00 to 22:00 and less than 60 dBA from 22:00 to 07:00.

FACILITY MANAGEMENT

31. The use of petroleum products for dust control is **not permitted**.
32. The Approval Holder is only permitted to use up to 15 litres per hour of self-generated used oil as a fuel at the Facility. The self-generated used oil is only to be used in a system that conforms with *CAN/CSA-B140.0-M87(R1991), General Requirements for Oil Burning Equipment* and/or *CAN/CSA-B140.4-1974(R1991), Oil-fired Warm Air Furnaces*. The burning of self-generated used oil greater than 15 litres per hour, non-self generated used oil, and/or waste derived fuel is **not permitted** at this Facility.
33. The Approval Holder shall ensure that all chemicals stored at the Facility are located in a dedicated Chemical Storage System. The system shall be set up to ensure that all chemicals are:
- a) secured in sealed and chemically resistant containers;
 - b) away from high traffic areas and protected from vehicle impacts;
 - c) away from electrical panels;
 - d) in a containment area that has secondary containment adequate to contain 110 % of the nominal volume of the largest container in the containment area;
 - e) in a containment area that is designed to prevent contact between incompatible chemicals; and
 - f) in a containment area designed to prevent the release or discharge of chemicals to the environment as a result of a spill.
34. The Approval Holder shall ensure that all waste chemicals and/or hazardous waste stored at the Facility are stored in a Waste Storage System. The system shall be set-up to ensure that all chemical wastes and/or hazardous waste are:
- i) secured in sealed and chemically resistant containers;
 - ii) in a containment area that has secondary containment adequate to contain 110 % of the nominal volume of the largest container in the containment area;
 - iii) in a containment area that is designed to prevent contact between incompatible waste chemicals; and
 - iv) in a containment area designed to prevent the release or discharge of waste chemicals to the environment as a result of a spill.

The Approval Holder shall advise the Department in writing prior to modifying the Waste Storage System.

The Approval Holder shall ensure that all Waste Chemicals and/or Hazardous Waste are disposed of in a manner acceptable to the Department. The Approval Holder shall provide the Waste Disposal Plan in writing to the Department and receive written acceptance from the Department on the plan prior to implementation

35. The Approval Holder shall ensure that waste wood materials are not permanently stored at the facility. Wood waste shall be disposed of in a method acceptable to the Department either by transport to another facility for use or to an approved landfill. The Approval Holder shall not stockpile wood waste for a period greater than 60 days.
36. The Approval Holder shall employ good housekeeping practices to ensure spillages of waste wood materials are cleaned up as soon as possible and handled in such a manner that fugitive emissions of wood materials do not leave the site of the facility.
37. The Approval Holder shall ensure that all solid waste generated at the Facility is disposed of in a manner and at a location which is acceptable to an Inspector. One acceptable method of disposal is at an approved landfill.
38. The Approval Holder shall ensure that all site runoff is collected and any discharge to the Southwest Miramichi River and Fowler Brook, or any other watercourse, is less than 50 mg/L for suspended solids in a grab sample.
39. The Approval Holder shall ensure that a thirty (30) metre vegetated buffer zone is maintained at all times along the edge of the Southwest Miramichi River and Fowler Brook. In cases where the facility has proceeded beyond the above mentioned setback, time will be given for the Approval Holder to develop and implement a Sediment and Erosion Control Plan.
40. The Approval Holder shall not make or perform any watercourse or wetland alteration or cause any watercourse or wetland alteration to be commenced, made or performed within 30 meters of the wetland or watercourse, without first applying for and obtaining a "Watercourse and Wetland Alteration Permit" from the Regional Services Division of the Department.
41. The Approval Holder shall ensure that all ash generated from the operation of the Facility's Heating Plant is disposed of at a location approved by the Director. Written acceptance from the Director must be obtained and retained on file for the duration of time in which this Approval remains in effect.

TESTING AND MONITORING


42. The Approval Holder shall conduct performance tests on atmospheric emissions of contaminants from the Facility or on ambient air quality at such times and in such a manner as the Director may, in writing, require.

43. The Approval Holder shall ensure that all source testing is completed in conformance with the most recent version of the New Brunswick Department of Environment **Guidance Document for Source Testing**.

REPORTING

44. In the event the Approval Holder violates any Term and Condition of this Approval or the *Air Quality Regulation*, the Approval Holder is to immediately report this violation by facsimile to the Department's applicable Regional Office. In the event the violation may cause the health or safety of the general public to be at risk and/or significant harm to the environment could or has resulted, the Approval Holder shall follow the Emergency Reporting procedures contained in this Approval.
45. In the event the Approval Holder receives a complaint from the public regarding unfavorable environmental impacts associated with the Facility, the Approval Holder is to report this complaint by facsimile to the Department's applicable Regional Office within one business day of receiving the complaint.
46. In the event of a small spill or leak of liquid materials, the Approval Holder shall act first to contain, and then to clean up the spilled or leaked material and mitigate any resulting impacts as soon as the spill or leak is detected. If the spill or leak results in an "environmental emergency" as defined in this Approval, the Approval Holder shall report the event in accordance with the Emergency Reporting section of this Approval. If the spill or leak is not an "environmental emergency", the Approval Holder shall report this event to the Department's applicable Regional Office by fax, within one business day, identifying the material spilled, the approximate amount of liquid spilled, the location of the spill and the method(s) used to clean up the liquid.
47. **By February 15 of each year**, the Approval Holder shall submit an Annual Environmental Report to the Department. The report shall, as a minimum, include the following information for the previous calendar year:
- i) the name of the fuel suppliers;
 - ii) the types of fuel used;
 - iii) the annual consumption of each type of fuel used;
 - iv) the average sulphur content of each type of fuel oil used; and
 - v) a summary report of all small spill and/or leak events at the Facility during the previous year, including the date, location, approximate volume, and method of cleanup for each spill and/or leak.

Prepared by:



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