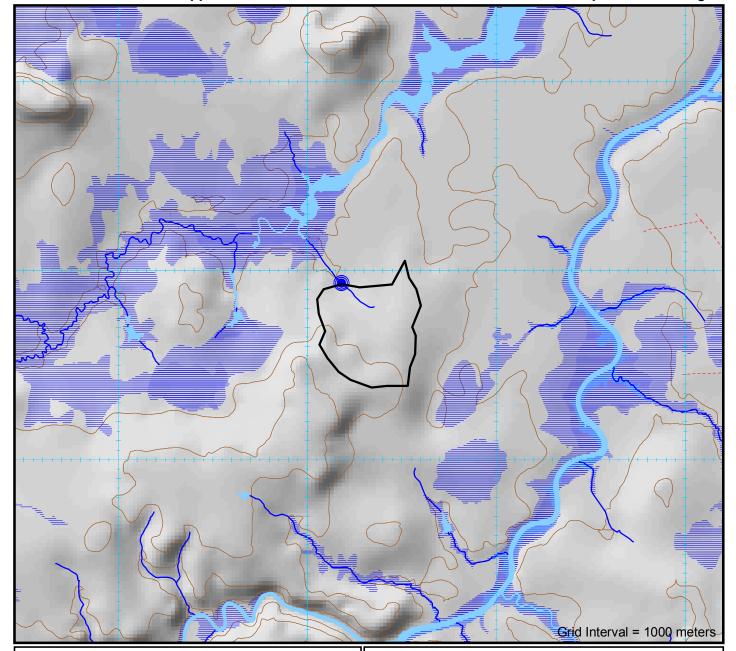
Abitibi River Forest Appendix 1: Form for Submission of Information on a Proposed Crossing



Watershed Characteristics

0.25 km² Watershed Area: 0.00 km² Lake Area: 0.00 km² Swamp Area: Retention Area: 0.00 km² 0.00 % Retention Factor: 0.00 Base Class:

Watercourse Type: Permanent

Crossing Location Characteristics

Evaluation ID No.: A3151 Geographic Township: Stoughton

UTM Coordinates (NAD83): 605182E, 5379935N

Road Type: Operational Stream Gradient: 0%

Slope > 30% (17°): **NO**

Installer Experience: As Per Approved Implementation Toolkit



	Proposed	Structures	
	Structure 1	Structure 2	Structure 3
Structure Type	Culvert	Bridge	Ice
Design Flow	Q25	Q25	Q2
Fill Material	Pit Run Gravel	Pit Run Gravel	Snow and Ice
Dates for In Start Water Work	July 16	July 16	
(if required) Finish	August 31	August 31	
Removal Timeframe	>2 Years	>7 Years	By March 31st

Calculations performed by First Resource Management Group (FRMG). Neither Abtitibi River Forest Management Inc., nor FRMG guaratee the accuracy of any information presented on this form. Coordinates and map are UTM projection, Zone 17 NAD83 datum.

ded Area for ARFMI Road ce Use Only Network No. 343	Previously Used Crossing ID	Crossing Evaluation Reference Number A3151
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Publication Date: December 14, 2023

Plan Term: 2022-2032

AWS Year: 2024-25

Abitibi River Forest - S.F.L. # 551832	Fisheries Operational Management Zone (OMZ):
Proponent: Georgia-Pacific North Woods	Standard for Self-assessed Water Crossing Construction, Removal and/or
c/o P.O. Box 867	Decommissioning: Single, Small Closed-Bottom Round Culvert
New Liskeard, Ontario	Previous Assessment Year (incl. SA): 2024
P0J 1P0	SAR species likely to be impacted: NO
(705) 680-0033	

Culvert E	Design Options	Q ₂₅	Q ₁₀	${f Q}_5$	Q _{2.33}
	Design Flow	0.000 m ³ /sec			
	1 Round	450mm	450mm	450mm	450mm
	2 Round	N/A	N/A	N/A	N/A
	3 Round	N/A	N/A	N/A	N/A
	1 Arch (BxD)	450x340mm	450x340mm	450x340mm	450x340mm
	2 Arch (BxD)	N/A	N/A	N/A	-
	3 Arch (BxD)	N/A	N/A	N/A	-

Required Opening for bridges is calculated as per the Crown Land Bridge Management Guidelines.

Preconstruction photos available:

Within 500m of Brook Trout stream:

Conditions on Culvert Design Options

- Initial Fisheries Review based on one pipe. Two or more pipes requires a re-assessment.
- Round culvert calculations assume 10% fill. For 20% fill, increase diameter to next highest standard diameter.
- For 40% fill, use a round culvert diameter of the Base distance of the corresponding Arch style culvert.

General Standards

- No watercourse realignment, nor use of explosives is permitted.
 Minimize loss or disturbance to riparian vegetation. Restrict removal of riparian vegetation to the disturbance footprint required for construction, maintenance and decommissioning of the water crossing.
- · Install erosion and sediment control measures prior to commencement of construction or decommissioning to prevent release of sediment or other deleterious substances into watercourse.
- Fill material placed below the normal high water mark must be erosion-resistant and/or protected from erosion. • Direct storm water runoff from bridge decks, side slopes, road approaches and ditches away from the watercourse
- and into a retention pond or vegetated area.

 Ensure erosion and siltation in ditch lines adjacent to the watercourse crossing approaches are controlled using sediment traps such as rock/soil dams or log jams as site conditions warrant.

 • Do not block or impede the free passage of water and fish at any time of year up and down stream,
- with the exception of potential and temporary blockage due to water crossing construction/decommissioning activities. Abide by fisheries in-water timing windows in the approved FMP and/or forest management guides.
- Where fishery communities are not well documented, the most restrictive in-water timing window must be used. • Complete all in-water construction and decommissioning activities in an uninterrupted fashion and in an appropriate timeframe to minimize potential for site disturbance.
- If installation requires inwater work, do not locate within 100m of spawning or sensitive fish habitat eg, rapids, riffles, known overwintering areas.
- Maintain machinery free of fluid and fuel leaks. Wash, refuel and service machinery at least 30m from watercourse. Store fuel and other materials for machinery a minimum of 30m from the watercourse.
- Operate machinery on land with tracks/wheels above the normal high water mark, or on ice in a manner that avoids disturbance to the banks of the watercourse and adjacent riparian vegetation areas.
- Remove all debris from construction and decommissioning work from the site following completion of the undertaking. • If machinery fording is required, limit to a one-time event (over and back) per piece of equipment essential to
- implementating the project, and only if using an existing crossing at another location is not available or practical.

 If minor rutting is likely, watercourse bank and bed protection methods (e.g., swamp mats, pads) are to be used provided they do not constrict flows or block fish passage;
- · Grading of the watercourse banks for the approaches is not permitted;
- If the watercourse bed and banks are steep and highly erodible (e.g., dominated by organic materials and silts) and erosion or degradation is likely, use a temporary crossing structure or other practice to protect them;
- The one-time fording must adhere to the appropriate in-water timing windows; Fording must occur under low-flow conditions and not when flows are elevated due to local rain events or seasonal flooding

• All calculations are for projecting ends. Total pipe length normally not to exceed 20m.

NO

NO

- All calculations assume a Headwater Depth of 1.0.
- MP = Multi-Plate (i.e. SPCSP)

Standards for Single, Small Closed-Bottom Round Culverts

- This standard applies to single, round, corrugated, closed-bottom steel, aluminum, or plastic culverts less than or equal to 1200mm in diameter that do not require site-specific engineering approval per MNRF's Crown Land Bridge Manual.
- This standard only applies if the project does not:
- Replace an existing open-bottom crossing (e.g., clear span bridge, arch culvert);
- Replace an existing closed-bottom culvert larger in diameter than that being installed; or - Involve the installation of more than one closed-bottom culvert at the crossing location.
- Locate, design and construct to minimize likelihood of ongoing outlet scour, culvert undermining or erosion of fill in order to provide stable, non-perched culverts that provide for fish passage
- Do not locate on meander bends, braided streams, or any other area inherently unstable that may result in alteration
- of natural stream functions or erosion and scouring of the structure. Size to a minimum Q25 design flow. If an unmapped stream is encountered and proper analysis cannot be
- completed to determine Q25, size to ensure it spans from bank to bank.
- Do not install where channel slope at crossing location is of a gradient greater than 2.0%.
- Do not install where slope of road approaches or either bank approach is greater than 30% (17°).
- · Locate where culvert can be embedded below grade of stream bed.
- · Use site-specific mitigation measures to ensure no ongoing erosion of fill. As a minimum:
- Stabilize both inlet and outlet ends with appropriately sized non-erodible material;
- Rock used is clean, free of fine materials and of sufficient size to resist peak flood events;
- Place rock at original bank grade to ensure no infilling or narrowing of watercourse;
- Fill material placed below normal high water mark must be erosion resistant and/or protected from erosion. The Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales refers to the normal high-water
- mark as the edge of vegetation communities capable of providing an effective barrier to the movement of sediment.

 Do not locate within 100 metres of fisheries spawning or sensitive habitat.
- Do not locate within 500 metres of any brook trout spawning or upwelling greas.
- Do not locate on watercourses that flow into, and are within 500m of, known naturally reproducing brook trout lakes. • Mix of size, length, slope & drainage area must not increase flows to consistently & predictably impede fish passage.
- Install under low-flow conditions and not when flows are elevated due to local rain events or seasonal flooding.
- Both interior and exterior of culverts must be corrugated to ensure structural stability and facilitate fish passage
- The grade of the culvert must reflect the grade of the natural watercourse bed.
- Compact backfill adequately around the culvert. Use only dean sand or gravel and compact around the culvert in layers.
- Length of culverts must permit banks to be sloped at an angle of 2:1 or a stable angle of repose for the materials used.

Self-assessed. Follow conditions of appropriate standard(s).

MNRF Appendix 2: Biologist Risk Evaluation

Concerns and Conditions on Construction

Watershed Thermal Code: UF

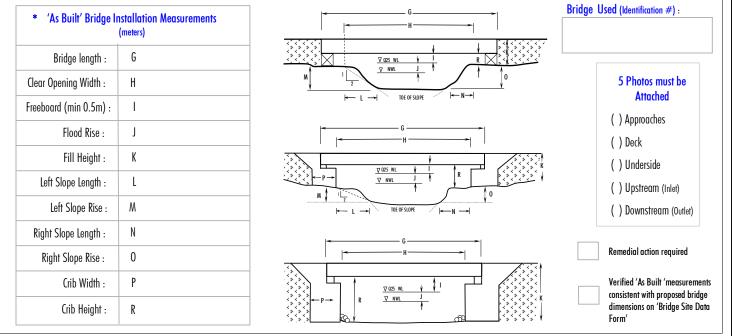


	Structure 1	Structure 2	Structure 3
Risk Evaluation:	LOW	LOW	LOW
Site Inspection Required:	NO	NO	NO

ABITIBI RIVER Forest Management Inc
Forest Management Inc

AR-MIC	rossing Installation	Report (Must be comple	eted for each crossing location)	Unly certifie	ed inspectors are allowed to conduct	Forest Operation
STIBI RIVER st Management Inc		(Mass se semp	orea for each or eaching receivery		* 'As Built' Culvert In	stallation Me meters)
Shareholder:		Block ID:			Installed Diameter :	
Contractor:		Poad Name:		CULVERT	Structure Length :	
Contractor.		Noau Name.			Road Width :	
SITE CONDITIONS ENCO	OUNTERED			0	Depth of Cover:	
Crossing Located By:		Date Measurements Taken:			Water Depth in Pipe :	
					Number of Culverts :	
Stream Measurements (meters)	٥.	1.0	Foundation Soil Description :		Spacing Between Pipes :	
Flood Plain Width : A		桑桑	Sand Muck			
Bankful Width : B		A	Silt Rubble Gravel		* 'As Built' Bridge In	stallation Me (meters)
Channel width : C	∫ _F ↑ _E	- B → V	City		Bridge length :	G
Depth - 25% of Channel : D (I)	D (!)) D(c) D(r)	Channel Type:		Clear Opening Width :	 H
Depth - 50% of Channel : D (c)			EphemeralIntermittent		Freeboard (min 0.5m) :	
Depth - 75% of Channel : D (r)	Notes:		Permanent	Ж	Flood Rise :	J
Depth - Bankful Flow : E			·····	BRIDGE	Fill Height :	K
Depth — Floodplain : F			ARFMI Notification Provided : (ARFMI Advised- 'Change to Operation' made)	8	Left Slope Length :	L
Stream Velocity:	m /sec		FRI Incorrect		Left Slope Rise :	M
1	1117,500		Unmapped		Right Slope Length :	N
					Right Slope Rise :	0
NSTALLATION CONDITI	ONS				Crib Width :	P
nstallation Supervised By:		Date of installation:			Crib Height :	R
				Verific	ation :	
Crossing Permanency : Refer to Structure Removal	Timeframe specified in AWS 4 and 5 Month/Year	E	rosion Prevention and Control (X):		I have confirmed that the final crossitisties the mandatory water cross	
Permanent Temporary	Decommissioned Date:		(Indicate applicable measures taken)		will not impede future transfer of a	esponsibility
Note: Measurements (\star) must be included for all structures which remain in place beyond date of inspection	Scheduled Removal Date:		eam banks and drainage ditch banks	Notes	s:	
Crown Land Bridge NAD	83 (Record Actual Crossing Location on Stream Segment):		ourse, clean rock to high water mark			
Bridge Record Form submitted	E	Re-vegetate or seed slo	opes (stream banks and ditch banks)			
(i.e. MNR /ARFMI)	N		Divert drainage ditches to green belt			
New Crossing Type: Structure	e Description: Type of Fill:		Line drainage ditches with rock			
Box Culvert	Steel Sand	Use rock weirs in dr	rainage ditches to impede water flow			
Arch Culvert P	lastic Gravel	Use filt	ter cloth on upstream side of culverts			
	Vood Rock Rubble	No grubbi	ing or stripping of ground vegetation			
	ocrete Other	Use filter cloth (On top of i	ice if fill is used for Winter Crossings)	Note: All	of the above activities must be checl	ked. 🗸- Verii
Steel Stringer Bridge Ford (Engine Winter Snow Pack	erea) [Other:		activities inspected are fully compliant	
willer 200M LOCK					person are ronly compliant	u on ull

	ER CROSSING OPERATIONS CH and inspectors are allowed to conduct Forest Operations Inspections for subm	•	
	* 'As Built' Culvert Installation Measurements (meters)	Depth of Cover Culvert Clearance (1.e. p due or 1000mm)	4 Photos must be Attached
₽	Installed Diameter :	(00)	() Approaches
CULVERT	Structure Length :	Describe Backfil Waterul Water	() Inlet
n.	Road Width :	Un-compacted Givest feeding (L. a. 200m Manum)	() Outlet
0	Depth of Cover:	Length of Q Length	() Inside Pipe
	Water Depth in Pipe :	Trainin Protection 1 Column Grain Restart Column Column Grain Restart Column Co	
	Number of Culverts :	Flow Supple 9 1%	
	Spacing Between Pipes :	Desorbe Enrole Protection p.a. Son Type)	Remedial action required
	* 'As Built' Bridge Installation Measurements (meters)	G H	Bridge Used (Identification #):



I have confirmed that the final crossing condition satisfies the mandatory water crossing standards and	Water crossing location same as AWS submission Installation of culvert and size same as described in AWS water shed calculations.
will not impede future transfer of responsibility	No sediments or woody debris left in water body or streams
	Construction materials removed from site
Notes:	Embankment sloped properly (e.g. 2:1) with no possibility of slumping
	Timing restriction met
	Culvert properly installed (i.e. refer to FMP Standards)
	Sediment Control Plan in AWS followed
	No Erosion or Sedimentation present (e.g. filter cloth used to prevent material from entering waterway)
	No signs of equipment or machinery in stream (i.e. culvert installed before equipment progresses past crossing)
	Coarse clean rock used on all culvert crossings
	Natural vegetation protected
	Additional measures used to prevent erosion (e.g. seed, filter cloth, rip rap etc.)
	Drainage ditches properly installed
	Crossing removed before March 31 unless left for silviculture activities
	Road right of way width through unallocated stands , no larger than FMP requirement
	Road right of way width through AOC's (reserves), no larger than FMP requirement
Note: All of the above activities must be checked.	ne within acceptable limits 🗶 - Outside of acceptable limits. Refer to comments for additional details N/A — Not applicable
11010. All of the above activities that be checked. Y - fertiled to be	Obside of decipionic minis. Role to comments to dudinolid doubles IVA — not applicable