

**ENVIRONMENTAL IMPACT ASSESSMENT REGISTRATION DOCUMENT FOR 138 KV RELIABILITY FOR  
FREDERICTON SOUTH**

Appendix C Environmental Attributes of the RoW for the 138 KV Reliability for Fredericton South  
November 1, 2019

**Appendix C ENVIRONMENTAL ATTRIBUTES OF THE ROW FOR  
THE 138 KV RELIABILITY FOR FREDERICTON SOUTH**



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**Table C.1 Data Sources Used in Environmental Attributes Analysis**

<b>Dataset</b>	<b>Agency Responsible/Data Source</b>	<b>Year of Dataset</b>
<b>Watercourses, Wetlands, and Waterbodies</b>		
Watercourse Crossings (< 30m wide)	New Brunswick Department of Energy and Resource Development (NBDERD)	2014
	Field surveys	2018
Watercourse Crossings (> 30m wide)	NBDERD	2014
	Field surveys	2018
GeoNB Mapped Wetlands	New Brunswick Department of Environment and Local Government (NBDELG)	2011
Field-delineated Wetlands	Field surveys	2018
Waterbodies	NBDERD	2014
<b>Protected Areas</b>		
Protected Natural Areas	NBDERD	2017
Candidate/Proposed Protected Natural Areas	NBDERD	2012
Provincial Parks	NBDERD	2011
Federal Protected Areas	Service New Brunswick (SNB)	2012
Protected Wellfields	NBDELG	2017
Wildlife Refuges and Management Areas	NBDERD	2013
Deer Wintering Areas	NBDERD	2015
Formerly Designated Deer Wintering Areas	NBDERD	2013
Old Forest Communities and Old Forest Wildlife Habitats	NBDERD	2015
Formerly Designated Old Forest Communities and Old Forest Wildlife Habitats	NBDERD	2015
Protected Watersheds	NBDELG	2014
<b>Sensitive Areas/Species at Risk</b>		
AC CDC Managed Areas	AC CDC	2018
Environmentally Significant Areas	AC CDC	2018
Fish Hatcheries	SNB	1998
AC CDC Fish Habitat	AC CDC	2018



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**Table C.1 Data Sources Used in Environmental Attributes Analysis**

<b>Dataset</b>	<b>Agency Responsible/Data Source</b>	<b>Year of Dataset</b>
Rare Species (Species at Risk or Species of Conservation Concern)	AC CDC Field surveys	2018 2018
<b>Archaeology</b>		
Palaeo Shoreline	Archaeological Services (AS)	2018
Registered Sites	AS	2018
High Potential	AS	2018
Medium Potential	AS	2018
Shovel Testing Recommendation	Field surveys	2018
<b>Designated Lands/Public vs. Private Lands</b>		
Crown Land	NBDERD	2017
Private Land	NBDERD	2016
Freehold Land	NBDERD	2016
Number of Crown Land Properties	NBDERD	2017
Number of Private Properties	NBDERD	2016
First Nations Lands: Property not located on Reserve	SNB	2016
Military Base	SNB	2005
Municipal Areas	NBDELG	2018
Existing Mining Claims	NBDERD	2016
Mining Agreements	NBDERD	2016
<b>Infrastructure</b>		
Pipeline Crossings	NBDERD	2013
Number of Road Crossings	New Brunswick Road Network (NBRN), SNB	2016
Number of Railway Crossings	SNB	2015
Number of Trail Crossings: trail often follows transmission line corridor	New Brunswick Federation of Snowmobile Clubs (NBFSC)	2016
<b>Socioeconomic</b>		
Pits/Quarries/Mines	SNB, NBDERD	1998 (SNB), 2015 (NBDERD)
Educational Building	SNB	1998
Cemeteries	SNB	1998
Religious Building	SNB	1998
Buildings	SNB	1998



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**Table C.1 Data Sources Used in Environmental Attributes Analysis**

Dataset	Agency Responsible/Data Source	Year of Dataset
Land Reserved for Residential Purposes	NBDERD	2015
Towers	SNB	1998
Landfills	SNB	1998
Historic Sites	SNB	1998
Industrial Sites	SNB	1998
Land Reserved for Industrial Purposes	NBDERD	2015
Recreational Sites	SNB	1998
Land Reserved for Recreational Purposes	NBDERD	2015
Transformer Stations	SNB, GeoNB Imagery	1998 (SNB), 2018 (GeoNB Imagery)
Land Reserved for Transportation, Communication and/or Utilities	NBDERD	2015
Agriculture	NBDERD	2015
Forest	NBDERD	2015
Shrubland	NBDERD	2015
Blueberry Fields	NBDERD	2015
Physical		
Steep Slopes (> 25 %) Based on 50 m Elevation Model	SNB	1998

**Table C.2 Environmental Attributes for Rainsford Line 1185 Expansion**

Feature	Line 1185 (PDA)	Details
Total Area	49.22 ha	
Watercourses, Wetlands, and Waterbodies		
Watercourse Crossings (< 30m wide)	11	
Watercourse Crossings (> 30m wide)	1, 1.63 ha	Saint John River
GeoNB-Mapped Wetlands	4 wetlands, 0.56 ha	Includes the PSW area (below). Additional field-delineated area outside of GeoNB-mapped area.
Provincially Significant Wetlands	2 wetlands, 0.14 ha	Associated with a tributary to Saint John River
Field-delineated Wetlands	50 wetlands, 6.3 ha	
Waterbodies	0	Only Saint John River (above)



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**Table C.2 Environmental Attributes for Rainsford Line 1185 Expansion**

<b>Feature</b>	<b>Line 1185 (PDA)</b>	<b>Details</b>
<b>Protected Areas</b>		
Protected Natural Areas	0	
Candidate/Proposed Protected Natural Areas	0	
Provincial Parks	0	
Federal Protected Areas	0	
Protected Wellfields	0	
Wildlife Refuges and Management Areas	0	
Deer Wintering Areas	0	
Formerly Designated Deer Wintering Areas	0	
Old Forest Communities and Old Forest Wildlife Habitats	0.64 ha	
Formerly Designated Old Forest Communities and Old Forest Wildlife Habitats	0	
Protected Watersheds	0	
<b>Sensitive Areas/Species at Risk</b>		
AC CDC Managed Areas	0	
Environmentally Significant Areas	1 – Keswick Ridge Escarpment	No area available – ESA boundaries are not mapped. Estimated to be up to 2.3 ha.
Fish Hatcheries	0	PDA is adjacent to Kingsclear Fish Hatchery
AC CDC Fish Habitat	1.56 ha	Saint John River, habitat for shortnose sturgeon, striped bass, and red breast sunfish
Rare Species (Species at Risk or Species of Conservation Concern)	1 vascular plant SAR, 8 vascular plant SOCC in the PDA	Additional species were observed in the LAA, outside of the PDA.
<b>Archaeology</b>		
Palaeo Shoreline	Class 2: 0.43 ha Class 3: 0.20 ha	
Registered Sites	0	
High Potential (AS <sup>1</sup> )	4.11 ha	encompassed by medium potential area
Medium Potential (AS <sup>1</sup> )	6.21 ha	encompasses high potential area



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<b>Feature</b>	<b>Line 1185 (PDA)</b>	<b>Details</b>
Shovel Test Recommendations	High Potential: 5.57 ha, 14 areas Medium Potential: 2.12 ha, 12 areas	
<b>Designated Lands/Public vs. Private Lands</b>		
Crown/Public Land	12 properties, 7.4 ha	Includes water (Saint John River) and road PIDs
Private Land	50 properties, 41.2 ha	
Freehold Land	1 property, 0.6 ha	Owned by H J Crabbe & Sons Ltd.
First Nations Lands: Property not located on Reserve	0	
Military Base	0	
Municipal Areas	City of Fredericton: 3.56 ha Hanwell: 19.91 ha	
Existing Mining Claims	0	
Mining Agreements	0	
<b>Infrastructure</b>		
Pipeline Crossings	0	
Number of Road Crossings	6	Fish Hatchery Lane Deerwood Dr. Highway 8 Serenity Lane Highway 102 Powerhouse Rd. *Some additional roads are visible from imagery, but not in the provincial roads database
Number of Railway Crossings	0	
Number of Trail Crossings: trail often follows transmission line corridor	1	Trans Canada Trail
<b>Socioeconomic</b>		
Pits/Quarries/Mines	0.65 ha	2 gravel pits
Educational Building	0	
Cemeteries	0	
Religious Building	0	
Buildings	0	



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<b>Feature</b>	<b>Line 1185 (PDA)</b>	<b>Details</b>
Land Reserved for Residential Purposes	0	PDA is adjacent to several residences
Towers	0	
Landfills	0	
Historic Sites	0	
Industrial Sites	0	
Land Reserved for Industrial Purposes	2.59 ha	This area is adjacent to the MGS and is used for activities related to the dam
Recreational Sites	0	
Land Reserved for Recreational Purposes	0	
Transformer Stations	0.8 ha	1 transformer
Land Reserved for Transportation, Communication and/or Utilities	Road RoW: 1.04 ha Transmission line RoW: 8.25 ha	
Agriculture	4.49 ha	
Forest	23.54 ha	
Shrubland	0	
Blueberry Fields	0	
<b>Physical</b>		
Steep Slopes (> 25 %) Based on 50 m Elevation Model	1.16 ha	
<sup>1</sup> Archaeological Services, a branch of the New Brunswick Department of Tourism, Heritage, and Culture		

