Webequie Supply Road Project

Webequie First Nation

January 30, 2026

AtkinsRéalis Ref: 661910

APPENDIX A-1: TABLE OF CONCORDANCE WITH TAILORED IMPACT STATEMENT GUIDELINES

AtkinsRéalis

WSR WEBEQUIE SUPPLY ROAD

WEBEQUIE FIRST NATION

Concordance with Tailored Impact Statement Guidelines (TISG) (February 24, 2020) for the Environmental Assessment Report/Impact Statement (EAR/IS)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
1	**Introduction**	
1.1	**Factors to be Considered in the Impact Assessment**	
	The Guidelines correspond to factors to be considered in the impact assessment. These factors are listed in subsection 22(1) of IAA and prescribe that the impact assessment of a designated project must take into account:	
	a) the changes to the environment or to health, social or economic conditions and the positive and negative consequences of these changes that are likely to be caused by the carrying out of the designated project, including:	
	i. the effects of malfunctions or accidents that may occur in connection with the designated project;	Section 23.5
	ii. any cumulative effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out; and	Section 21.3.1 Section 21.3.5
	iii. the result of any interaction between those effects.	Section 21 Section 23
	b) mitigation measures that are technically and economically feasible and that would mitigate any adverse effects of the designated project;	Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4 Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 19.4 Section 20.4 Appendix E
	c) the impact that the designated project may have on any Indigenous group and any adverse impact that the designated project may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982;*	Section 19.5
	d) the purpose of and need for the designated project;	Section 1.3
	e) alternative means of carrying out the designated project that are technically and economically feasible, including through the use of best available technologies, and the effects of those means;	Section 10.4 Section 11.4 Section 25.3 Section 26.5 Section 25.6

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	f) any alternatives to the designated project that are technically and economically feasible and are directly related to the designated project;	Section 10.4 Section 11.4 Section 25.3 Section 26.5 Section 25.6
	g) Indigenous knowledge provided with respect to the designated project;	Section 10.1.3 Section 11.1.3 Section 26.3
	h) the extent to which the designated project contributes to sustainability;	Section 26.7
	i) the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change;	Section 25.1 Section 25.2
	j) any change to the designated project that may be caused by the environment;	-
	k) the requirements of the follow-up program in respect of the designated project;	Section 10.10 Section 11.13, Section 26.4.3
	l) considerations related to Indigenous cultures with respect to the designated project;	Section 10.1.3, Section 11.1.3, Section 11.3.3.3, Section 26.7.2
	m) community knowledge provided with respect to the designated project;	Section 11.1.1
	n) comments received from the public;	Section 10.1.2 Section 11.1.2
	o) comments from a jurisdiction that are received in the course of consultations conducted under section 21 of IAA*;*	Section 10.1. Section 11.1.2
	p) any relevant assessment referred to in sections 92, 93 or 95 of IAA*;*	Section 1.4.2.1
	q) any assessment of the effects of the designated project that is conducted by or on behalf of an Indigenous governing body and that is provided with respect to the designated project;	Section 10 Section 11 Section 25 Section 26
	r) any study or plan that is conducted or prepared by a jurisdiction—or an Indigenous governing body not referred to in paragraph (f) or (g) of the definition *jurisdiction* in *section 2* of IAA—that is in respect of a region related to the designated project and that has been provided with respect to the project;	-
	s) the intersection of sex and gender with other identity factors; and	Section 14.2.1.3
	t) any other matter relevant to the impact assessment that the Agency requires to be taken into account.	Section 5
	The proponent is required to provide all maps as electronic geospatial data file(s) compliant with the ISO 19115 standard.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
2	**Overview**	Section 1
2.1	**The Proponent**	
	The Impact Statement must:	
	▪ Identify the proponent(s) and, where applicable, the name of the legal entity(ies) that would develop, manage and operate the Project;	Section 1.2.1
	▪ Provide contact information for all proponent representatives for the project (e.g., name, address, phone, fax, email);	Section 1.2.1
	▪ Describe organizational structure of the project team;	Section 1.2.4 Appendix B
	▪ Describe the management team, including experience and qualifications;	Section 1.2.4 Appendix B
	▪ Identify the secured or anticipated financial means to carry out all project phases;	Section 1.2.5
	▪ Identify relevant internal processes and policies, such as for procurement, project management, and Human Resources;	Section 1.2.2 Section 1.2.3
	▪ Specify the mechanism used to ensure that organizational policies will be implemented and respected for the Project; and	Section 1.2.3
	▪ Identify and describe qualifications of key personnel, contractors, and/or sub-contractors responsible for preparing the Impact Statement and conducting the impact assessment.	Appendix B
2.2	**Project Overview**	
	The Impact Statement must describe the Project, key project components and ancillary activities, precise scheduling details, the timing of each phase of the Project and other key features. If the Project is part of a larger sequence of projects, the Impact Statement must outline the larger context, including likely future developments by other proponents that may use project infrastructure, and activities that may be enabled by the current Project.	Section 1 Section 4 Section 5
2.3	**Project Location**	
	The Impact Statement must describe the geographical setting and socio-ecological context in which the Project is to take place. The description should focus on aspects of the Project and its setting that are important in order to understand the potential environmental, health, social and economic effects and impacts of the Project. The following information must be included and, where appropriate, located on map(s):	Section 1.1.1 Section 4.1
	▪ Geographic coordinates (i.e., longitude/latitude using international standard representation in degrees, minutes, seconds) for the beginning and end points of the proposed road;	Section 1.1.1
	▪ Current land and/or aquatic uses within the study areas;	Section 1.3.2.2 Section 16.2.2.1 Section 16.2.2.2
	▪ Distance of the project components to any federal lands and the location of any federal lands within the study areas;	Section 16.3.1.1
	▪ All waterbodies and their location on a map;	Section 7.2.2
	▪ Navigable waterways;	Section 16.2.2.7
	▪ The environmental significance and value of the geographical setting in which the Project will take place and the study areas;	Section 11.2.2
	▪ Environmentally sensitive areas, such as national, provincial, territorial and regional parks, UNESCO World Heritage Sites, geological heritage sites, ecological reserves, ecologically and biologically sensitive areas, wetlands, and habitats of federally or provincially listed species at risk and other sensitive areas;	Section 11.2.2 Section 16.2.2.7

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Dedicated Protected Areas[3] and any other areas of ecological and social significance identified by the community during the community-based land use planning processes with the Province of Ontario (e.g., Enhanced Management Areas; see Section 6.1 for requirements related to confidentiality); [3] Under the *Far North Act*, dedicated protected areas can be either: unregulated designations in community-based land use plans or regulated under the *Far North Act* or the *Provincial Parks and Conservation Reserves Act* (PPCRA). For more information: https://www.ontario.ca/page/ontarios-parks-and-protected-areas#section-1	Section 16.2.2.2
	▪ Lands subject to conservation agreements;	*There are no lands subject to conservation agreements
	▪ Current mineral development proposals, and areas of early and advanced mineral exploration in the study areas;	Section 16.2.2.3 Section 8 in Appendix L
	▪ Current areas of aggregate extraction;	
	▪ Description and locations of all potable drinking water sources (i.e., municipal or private), including spring water sources;	Section 16.2.2 Section 19.2.2 Section 7 in Appendix L
	▪ Description of local communities and Indigenous groups that is culturally relevant and gender sensitive;	Section 14.2.2 Section 19.2.2 Sections 4, 5, 7 in Appendix L Appendix M
	▪ If the information is not confidential, provide a description and location of Indigenous traditional territories and/or consultation areas, Treaty and/or Title lands, Indian Reserve lands, Indigenous harvesting regions (with permission of Indigenous groups), Métis settlements; and	Section 19.2.2 Section 7 in Appendix L *Confidential information has been excluded/redacted
	▪ Culturally important features of the landscape.	Section 19.2.2 Section 20.2.2 Section 7 in Appendix L Appendix S
	Information listed above, must also incorporate information received from Indigenous groups (See Section 6.1 of the TISG for requirements related to confidentiality).	Section 2.3 Section 19.1.2 Section 19.1.3 Section 19.2.1 Section 19.2.2 Section 6.3 Section 7.3 Section 8.3 Section 9.3 Section 10.3 Section 11.3 Section 12.3 Section 13.3 Section 14.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 15.3 Section 16.3 Section 17.3 Section 19.3 Section 19.5 Appendix M
2.4	**Regulatory Framework and the Role of Government**	
	The Impact Statement must identify:	
	▪ Any federal power, duty or function that may be exercised that would permit the carrying out (in whole or in part) of the Project or associated activities;	Section 1.4.2 Section 1.4.4 Section 2.2.2
	▪ Any federal authority's provision of financial assistance to the proponent for the purpose of enabling the project to be carried out, in whole or in part;	Section 1.2.5
	▪ Legislation and other regulatory approvals that are applicable to the Project at the federal, provincial, regional and municipal levels or from any body—including a co-management body—established under a land claim agreement referred to in section 5 of the *Constitution Act, 1982*, or from an Indigenous governing body as defined in the *Impact Assessment Act* (IAA) that has powers, duties or functions in relation to the environmental effects of a project, including a list of the federal, provincial or territorial GHG legislation, policies or regulations that will apply to the Project, as per the Strategic Assessment of Climate Change[4]; [4] https://www.strategicassessmentclimatechange.ca/	Section 1.4 Section 5.2.1.1
	▪ Any coordinated EA that is ongoing, including the details of how the proponent is ensuring that requirements for both processes are being met (including technical work and consultation requirements);	Section 1.4
	▪ Government policies, resource management plans, planning or study initiatives relevant to the Project and/or impact assessment and their implications, including relevant regional studies and strategic assessments; and	Section 5.2.1.1
	▪ Any treaty, self-government, land claims or other agreements between federal or provincial governments and Indigenous groups that are pertinent to the Project and/or IA;	Section 1.3.2.1 Section 5.2.1.1 Sections 14 to 16 Sections 19 to 20
	▫ any relevant land use plans, land zoning, or community plans (including any draft Community Based Land Use Plans that are publicly available or have been shared by Indigenous groups);	
	▫ any land designation processes that may be triggered;	
	▫ information on land lease agreement or land tenure, when applicable; and	
	▫ municipal, regional, provincial and/or national objectives, standards or guidelines, by-laws, or ordinances that have been used by the proponent to assist in the evaluation of any predicted environmental, health, social or economic effects or impacts.	
2.5	**Qualifications of Individuals Preparing the Impact Statement**	
	In support of ensuring transparency and the quality of the scientific information and analysis being applied, the proponent must provide information (name, title and summary of qualifications and/or experience) on the individuals who prepared the sections within the Impact Statement related to environmental, economic, social, and health effects and impacts on the exercise of rights of Indigenous peoples. The proponent must adhere to the principles of scientific integrity, honesty, objectivity, thoroughness and accuracy, and are required to demonstrate that a qualified individual has prepared the information or studies provided. A qualified individual would include someone who, through education, experience or knowledge relevant to a particular matter, may be relied on by the proponent to provide advice within his or her area of expertise. Knowledge relevant to a particular matter may include Indigenous and community knowledge.	Appendix B

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
3	**Project Description**	
3.1	**Project Components** The Impact Statement must describe the Project, by listing and describing the project components, associated and ancillary works, and other characteristics to assist in understanding the potential environmental, health, social and economic effects, effects on Indigenous peoples and impacts on the exercise of rights of Indigenous peoples[5], as identified by the Indigenous group(s). This description must be supported with maps of all project components listed below, boundaries of the proposed site with geographic coordinates, major existing infrastructure, proponent lands, properties or leased lands, adjacent resource lease boundaries, adjacent land uses and any important environmental features. [5] This document uses the term 'Indigenous peoples' to represent the "aboriginal peoples of Canada" which includes Indian, Inuit and Métis peoples as defined in subsection 35(2) of the Constitution Act, 1982, and 'rights of Indigenous peoples ' is used to reflect the full scope of potential or established Aboriginal and Treaty rights recognized and affirmed by section 35 of the Constitution Act, 1982.	Section 4.3
	The Impact Statement must describe all project components including but not limited to:	
	▪ Water management infrastructure to divert, control, collect and discharge surface drainage and groundwater seepage to the receiving environment;	Section 4.3.2
	▪ Waterbody diversions/realignments, dewatering and deposition activities;	Section 4.3.2
	▪ The location and details of single and multi-span watercourse crossings and types of structure used for water crossings (crossing type, design, length, etc.);	Section 4.3.2
	▪ The location and details of culverts for water flow connectivity and water level balancing (type, design, length, etc.);	Section 4.3.2
	▪ Final route for all permanent and temporary linear infrastructure, including the road corridor, width of road surface, width of cleared corridor, width of right-of-way, access roads (permanent and temporary), and temporary crossings;	Section 4.2.1 Section 4.3.3.2 Section 4.4.2 Section 4.4.2.5
	▪ Description of the area to be cleared;	Section 4.4.2.2
	▪ Construction workspace and laydown areas;	Section 4.3.3.3 Section 4.3.3.6, Section 4.4.2.3
	▪ Storage for fuels, explosives and hazardous wastes; drinking and industrial water requirements (source, quantity required, need for water treatment);	
	▪ Energy supply source;	Section 4.3.3.4
	▪ Worker accommodations and camps (permanent and temporary)	Section 4.3.3.3
	▪ Borrow pits, gravel or aggregate pits and quarries (footprint, geographic location, ownership, and development plans including pit phases and lifespan), including their location in relation to permafrost terrain, upland habitats and the presence of rare, limited and/or significant habitat (e.g., federal[6], provincial, or Indigenous protected and conserved areas, ANSIs[7] (Areas of Natural and Scientific Interest), Ramsar sites[8], critical habitat identified under the Species at Risk Act, etc.; [6] https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-conserved-areas-database.html [7] https://www.ontario.ca/page/ontarios-parks-and-protected-areas#section-4 [8] https://www.ramsar.org/wetland/canada	Section 4.3.3.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Waste rock, overburden, topsoil, gravel and rock storage and stockpiles (footprint, locations, volumes, development plans and design criteria);	Section 4.4.2.3.3 Section 4.4.2.4 Section 4.4.2.6 Section 4.4.3.1
	▪ Aggregate extraction and production (crushing/screening) facilities (footprint, technology, location);	Section 4.4.2.3.3 Section 4.4.3.1.5
	▪ Waste disposal (types of waste, methods of disposal, quantity, location of disposal sites);	Section 4.4.2.8 Section 4.4.3.1.12
	▪ Remediation of project site, including post-construction clean-up and restoration; and	Section 4.4.2.6 Section 4.4.2.9
	▪ Any other infrastructure relevant to the Project, including any planned or anticipated co- location, construction or site preparation of additional right-of-way infrastructure such as, but not limited to, transmission lines, telecommunication infrastructure, and pipelines.	Section 4.3.1 Section 4.3.2 Section 4.3.3
3.2	**Project Activities**	
	The Impact Statement must include descriptions of project activities to be carried out during each project phase, the location of each activity and the activity's duration, magnitude and scale.	Section 4.4
	The Impact Statement must provide a complete list of project activities and focus on activities with the greatest potential to have environmental, health, social and economic effects on local communities and Indigenous people and the impacts to the exercise of Aboriginal and Treaty rights of Indigenous peoples as defined in Section 35 of the Constitution Act, 1982[9]. The criteria used to determine which project activities have the greatest potential effects should be described. Sufficient information must be included to adequately predict adverse and positive environmental, health, social and economic effects, the interaction between those effects and any disproportionate effects for diverse subgroups. [9] Section 35 of the *Constitution Act, 1982* states*:* (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed. (2) In this Act, "aboriginal peoples of Canada" includes the Indian, Inuit and Métis peoples of Canada. (3) For greater certainty, in subsection (1) "treaty rights" includes rights that now exist by way of land claims	Section 4.4
	The Impact Statement must provide evidence that input from diverse subgroups was sought through early, meaningful and ongoing engagement activities and that there was broad participation by individuals or groups to identify potential effects or other concerns and issues. The information must be sufficient to provide an analysis regarding the Project's impacts in the context of potential interaction between each valued component.	Section 2.2 to 2.5 Record of Engagement and Consultation
	The Impact Statement must highlight activities that involve periods of increased disturbance to environmental, health, social and economic conditions or impacts on the exercise of rights of Indigenous peoples. The Impact Statement must include a schedule including time of year, frequency, and duration for all project activities.	Section 4.3 Section 4.4
	The Impact Statement will include an updated Project Description, which outlines any new information or project details. This will include a summary of the changes that have been made to the Project since originally proposed in the Detailed Project Description, including the reasons for the changes and the anticipated changes to the environment or to health, social or economic conditions and the predicted positive and negative consequences of these changes. This will also include an appendix of all the proposed mitigation and follow-up program measures to address adverse effects and potential impacts on the rights of Indigenous people. Project activities, where relevant to the Project, may include, but are not limited to a description of the elements listed below.	Section 4 Section 4.7

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
3.2.1	**Construction Phase**	
	The Impact Statement must describe the anticipated activities during the construction phase of the Project, including:	
	▪ Physical surveying of road right-of-way width and alignment, as well as supportive temporary infrastructure (e.g., access roads, aggregate source area and camps);	Section 4.3 Section 4.4.2.1 Appendix D-1
	▪ Vegetation clearing, earth excavation and other roadbed preparation activities, earth grading and granular placement for road construction;	Section 4.4.2.2
	▪ Temporary clearing and grubbing for construction and for activities such as aggregate sourcing, temporary lay-down areas, staging areas, including work camps, and debris or timber stockpiles;	Section 4.4.2.2 Section 4.4.2.3
	▪ Management and stockpiling of topsoil and unsuitable earth material along the right-of-way;	Section 4.4.2.3
	▪ Water management, including water diversions, dewatering or deposition activities, storm water management required (location, methods, timing), potable water, water use requirements, and wastewater if applicable, including:	Section 4.3.2 Section 4.4.2.3 Section 4.4.2.4 Section 4.4.2.5 Section 5.8 in Appendix E
	▫ site plans showing all project components, such as, water management infrastructures, location of all material stockpiles, location of all release points to the receiving environment, location of all major water crossings, location of all relevant waterbodies, and any other components or infrastructures relevant to the Project;	Section 4.3 Section 4.4 Section 4.6 Section 22.3
	▫ ditching and drainage excavation, including the construction of culverts for road drainage; and	Section 4.3
	▫ construction of single and multi-span watercourse crossing structures, including culverts.	Section 4.3.2.2 Section 4.4.2.5
	▪ Borrow material and aggregate requirements (source and quantity), extraction, production and transportation;	Section 4.3.3 Section 4.4.2.3.3
	▪ Wetland drainage;	Section 4.4.2.4
	▪ Blasting (frequency, duration, time of year, time of day and methods);	Section 4.3.3.6 Section 2.1.3, 3.3, 5.12, 5.20 in Appendix E Appendix J
	▪ Explosives manufacture, storage and management;	Section 4.3.3 Section 4.3.3.6 Section 4.4.2.3 Section 2.1.3, 3.3, 5.5 in Appendix E
	▪ Storage and management of material stockpiles, hazardous materials, fuels and residues;	Section 4.4.2.3
	▪ Storage and handling of petroleum products, chemical products, hazardous materials and residual materials;	Section 4.4.2.4 Section 4.4.2.6 Section 4.4.2.8

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 4.4.3.1 Section 4.3.3.6 Section 2.1.5, 2.1.13, 2.2.5, 3.3, 5.2, 5.5 in Appendix E
	▪ Waste management and recycling;	Section 4.3.3.3 Section 4.4.2.3 Section 4.4.2.6 Section 4.4.2.8 Section 2.1, 5.5, 3.3, 5.2, 5.5 in Appendix E
	▪ Earth and aggregate hauling operations;	Section 4.3.3.2 Section 4.4.2
	▪ Operation, maintenance and storage of machinery and equipment;	Section 4.3.3.3 Section 4.3.3.4 Section 4.3.3.5 Section 4.4.2.3 Section 4.4.2.7 Section 3.3. 4, 5.5 in Appendix E
	▪ Transportation of employees;	Section 14.3.1 Section 16.3.4 Section 2.1.6 in Appendix E
	▪ Equipment and crew mobilization/de-mobilization;	
	▪ Earthmoving, levelling, grading, and construction of the roadbed (for all new right of ways or roads);	Section 4.4.2.4
	▪ Operation and dismantling of temporary camps (capacity, wastewater treatment);	Section 4.3.3.3 Section 4.4.2.3 Section 4.4.2.6
	▪ Post-construction decommissioning, clean-up and restoration (including of construction equipment and vehicles, work areas, borrow pits, gravel pits, rock quarries, and laydown areas, construction materials, and temporary access roads);	Section 4.4.2.6 Section 2.1.14 in Appendix E
	▪ Construction of access roads (permanent and temporary);	Section 4.3.3.2 Section 4.4.2.3.2
	▪ Construction of site fencing;	Section 4.3.1.8 Section 4.3.3.3 Section 1.2, 2.1.19 in Appendix E
	▪ Operation of light duty, heavy-duty and mobile off-road equipment (type, quantity);	Section 4.4.2.7
	▪ Alteration of linked roadways needed for construction and operation;	Not Applicable. (See Section 4.3.1.1.1)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Contribution to atmospheric emissions, including emissions profile (type, rate and source);	Section 4.4.2.8 Section 9.2 Section 9.3 Section 2.1.1, 3.3 in Appendix E Appendix G Appendix H
	▪ Transportation of equipment and supplies (type and quantity of equipment, and mode of transportation, including winter roads, air transport, rail, etc.);	Section 4.4.2 Section 4.3.3.3
	▪ The ownership, transfer and control of the different project components, if applicable; and	Not Applicable. (See Section 1.1, Section 4.4.3)
	▪ Use of winter roads by the proponent for site preparation and construction.	Section 4.4.2 Section 4.3.3.3
3.2.2	**Operation Phase**	
	The Impact Statement must describe the anticipated activities during the operation phase of the Project, including:	Section 4.4.3
	▪ The ownership, transfer and control of the different project components, if applicable;	Not Applicable (See Section 1.1, Section 4.4.3)
	▪ Surface repairs, both localized and full resurfacing of the road, including equipment requirements (type, quantity);	Section 4.4.3.1.4
	▪ Dust control activities;	Section 4.4.3.1.6 Section 2.1.1 and 2.2.1 in Appendix E
	▪ Vegetation management within the right of way;	Section 4.4.3.1.2 Section 2.1.18, 2.2.6, 2.2.9, 3.3 in Appendix E
	▪ Winter maintenance, snow clearing and de-icing, including responsible salt/sand application and management;	Section 4.4.3.1.10
	▪ Facility maintenance yard to store sand and/or salt and to house roadway maintenance equipment;	Section 4.4.3.1.9
	▪ Water management, including:	
	▫ maintenance of storm water and the road drainage system (culverts, ditches, outfalls, and any water diversions (location, methods, timing);	Section 4.4.3.1.3 Section 4.4.3.1.7 Section 2.2.8 and 2.2.9 and 2.2.10 in Appendix E
	▫ potable water, water use requirements; and	Section 4.4.3.1.9
	▫ process water, wastewater, water recycling and effluent treatment (quantity, treatment requirements, release points and their receiving waterbodies).	Section 4.4.3.1.9 Section 4.4.3.1.12
	▪ Bridge and culvert maintenance;	Section 4.4.3.1.3 Section 2.2.9 in Appendix E
	▪ Characterization and management of borrow material, including overburden, and aggregate (storage, handling and transport of the volumes generated, mineralogical characterization, potential for metal leaching and acid rock drainage);	Section 4.3.3.1.2 Section 4.4.3.1.5 Section 3.3 in Appendix E

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Transportation of employees;	Section 14.3.1 Section 16.3.4
	▪ Description of any road access controls, including but not limited to:	Not Applicable (See Section 1.1, Section 4.4.3, Section 16.4.1)
	▫ access to and use of adjacent lands for traditional uses or other activities (e.g., mineral exploration, outfitters, etc.);	
	▫ vehicle and operator licensing requirements;	
	▫ insurance coverage requirements and general liability; and	
	▫ enforcement/policing responsibility.	
	▪ Anticipated road use by different users (traffic volume, type of vehicles, maximum weight, etc.), including Indigenous groups, the general public, and mining proponents of reasonably foreseeable future projects (e.g., Eagle's Nest, Blackbird, Black Thor, Black Label, Big Daddy, etc.) as well as users from anticipated future community access roads and provincial highway network connection);	Not Applicable (See also: Section 4.2.1 Section 4.4.3)
	▪ Aggregate production and stockpiling, aggregate extraction, processing and treatment;	Section 4.3.3.1 Section 4.4.3.1.5
	▪ Drilling and blasting, explosives manufacture, storage and use, aggregate crushing and sorting (frequency and methods);	Section 4.3.3.1 Section 4.4.3.1.5
	▪ Management and disposal of wastes; and	Section 4.4.3.1.9 Section 4.4.3.1.12 Section 2.2.2 and 3.3 in Appendix E
	▪ Use of winter roads by the proponent during operations.	Section 4.2.1 Section 4.4.3
3.2.3	**Abandonment and Decommissioning Phase, Including Suspension**	
	The Impact Statement must describe the anticipated activities during the abandonment and decommissioning (including suspension) phases of the Project, including:	Not Applicable There are currently no plans or need to decommission the Project. The Project is proposed to be operated for an indeterminate time period (See Section 1.1, Section 4.4.1)
	▪ The ownership, transfer and control of the different project components;	
	▪ The preliminary outline of a suspension, abandonment, decommissioning or reclamation plan for any components associated with the project;	
	▪ Final site restoration;	
	▪ Dismantling and removal of equipment;	
	▪ Removal and reclamation of ancillary structures;	
	▪ Long term care, monitoring and maintaining the integrity of the site and any remaining structures; and	
	▪ Suspension, abandonment or decommissioning for temporary or permanent facilities, including aggregate pits, access roads and water crossings.	
	If the proponent does not anticipate decommissioning and abandonment, it must state clearly under what circumstances decommissioning would occur and demonstrate a commitment to following environmental and social best practice in all its activities.	Section 4.4.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
3.3	**Workforce Requirements**	
	The Impact Statement must describe the anticipated labour requirements, employee programs and policies, and workforce development opportunities for all phases of the Project, including:	Section 4.5
	▪ Opportunities for employment outlining the anticipated number of full-time and part-time positions to be created, and how this will change during the various phases of the project;	Section 4.5.1 Section 4.5.2 Section 15.3 Appendix N
	▪ Anticipated workforce region of origin (i.e., local, regional, out-of-province or international employees);	Section 4.5.1 Section 4.5.2 Section 15.3 Appendix N
	▪ The skill and education levels required for the positions;	Section 4.5.1 Section 4.5.2 Section 15.3 Appendix N
	▪ Investment in training opportunities;	Section 4.5.3 Section 15.4 Appendix N
	▪ Expected workforce requirements based on the National Occupational Classification system and timelines for employment opportunities;	Section 4.5.1 Section 4.5.2 Section 15.3.3
	▪ Working conditions and anticipated work scheduling for construction and operation (e.g., hours of work, rotational schedules, fly-in/fly-out);	Section 4.4.2 Section 4.5.1 Section 15.2.1.2.3 Appendix N
	▪ Anticipated hiring policies, including hiring programs;	Section 4.5 Section 14.3.1 Section 14.4 Appendix N
	▪ Workplace policies and programs for Indigenous employment, workplace diversity and employment of other underrepresented groups;	Section 4.5 Section 14.3.1 Section 14.4 Appendix N
	▪ Social structures or institutions, processes and practices (including laws, policies, decision- making) that either promote or act as a barrier to gender equality and to diverse groups of people;	Section 14.3 Section 14.4 Appendix M
	▪ Employee assistance programs and benefits programs; and	Section 7.4 in Appendix N Section 15.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Workplace policies and programs, including codes of conduct, workplace safety programs and cultural training programs.	Section 2.1.6, 2.1.7, 2.1.10, 2.2.3, 3.3 in Appendix E Section 14.4 Section 15.4
	In addition to the above, the Impact Statement must include Gender Based Analysis Plus GBA+[10] in its discussion of workforce requirements to describe any potential differential effects for diverse subgroups in the community. This must include a discussion of how hiring policies and programs, access to employment and training opportunities, investment in training, workplace policies and programs take into consideration vulnerable or underrepresented groups, including Indigenous people or other community relevant subgroups (e.g., women, youth, elders). [10] Gender Based Analysis Plus (GBA+) provides a framework to describe the full scope of potential adverse and positive effects under the proposed IAA. GBA+ is an analytical framework that guides practitioners, proponents and participants to ask important questions about how projects may affect diverse or potentially vulnerable population groups or subgroups who may be less likely to benefit from project activities. https://www.canada.ca/en/impact-assessment-agency/services/policy- guidance/practitioners-guide-impact-assessment-act/gender-based-analysis.html	Appendix M Section 14.2 Section 15.2 Section 17.2
4	**Project Purpose, Need and Alternatives Considered**	
4.1	**Purpose of the Project**	
	The Impact Statement must outline what is to be achieved by carrying out the project. The statement should broadly classify the project (e.g., electricity supply, mineral extraction/processing, etc.) and indicate the target market (e.g., international, domestic, local, etc.), or end-users, where applicable. The purpose of statement should include any objectives the proponent has in carrying out the project. The proponent is encouraged to consider the perspectives of participants, including future project users (i.e., public, Indigenous groups, governments) in establishing objectives that relate to the intended effect of the Project on society.	Section 1.3.2
4.2	**Need for the Project**	
	The Impact Statement must describe the underlying opportunity or issue that the Project intends to seize or solve and should be described from the perspective of the proponent. In many cases, the need for the Project can be described in terms of the demand for a resource, service or piece of critical infrastructure to further economic development goals. The proponent should provide supporting information that demonstrates the need for the Project, inclusive of needs expressed by other parties that may share the need for the Project (e.g., public, Indigenous groups, governments). The information provided should make it possible to reasonably conclude that there is an opportunity or issue that warrants a response and that the proposed Project is an appropriate approach (e.g., the Project has sufficient connections to necessary infrastructure). The information provided should also state the purpose for the Project in the event that reasonably foreseeable future projects in the area do not occur. The proponent must report the comments or views of Indigenous peoples, the public and other participants on the proponent's need statement.	Section 1.3.2
4.3	**Alternatives to the Project**	
	The Impact Statement must further describe the no-action (null) alternative, noting the baseline conditions of the valued components associated with the Project, as well as changes to these baseline conditions that are likely to occur in the future if a Project was not carried out (e.g., changes in result of other projects already planned for the region, changes to the socio-economic conditions, etc.). No further analysis (beyond analysis of the null alternative) is required of the other "alternatives to" outlined in the Detailed Project Description.	Section 3.1 Section 6.9 Section 7.9 Section 8.9 Section 9.9 Section10.9 Section 11.12 Section 12.10 Section 13.9

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 14.9 Section 15.9 Section 16.9 Section 17.9 Section 18.9 Section 20.9
4.4	**Alternative Means of Carrying Out the Project**	
	The Impact Statement must identify and consider the potential environmental, health, social and economic effects of alternative means of carrying out the Project that are technically and economically feasible. The Impact Statement must describe:	Section 3.2
	▪ The criteria to determine technical and economic feasibility of possible alternative means;	Section 3.2.2 Section 3.2.3
	▪ The best available technologies considered and applied in determining alternative means;	Section 3.2.2
	▪ Each alternative means in sufficient and appropriate detail; and	Section 3.2.4
	▪ Those alternative means that are technically and economically feasible.	Section 3.2.4
	The Impact Statement must identify the elements of each alternative means and the associated adverse and positive environmental, health, social or economic effects or impacts on the exercise of rights of Indigenous peoples, as identified by the Indigenous group(s). The application of Gender Based Analysis Plus (GBA+) that considers the potential for disproportionate effects for diverse subgroups, including groups identified by age, socio-economic status or disability is required. The proponent must also consider the views or information provided by Indigenous people, the public and other participants in establishing parameters to compare the alternatives means. The determination of alternative means must be conducted in accordance with the Impact Assessment Agency of Canada's policy and guidance documents[11]. [11] https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guidance-need-for-purpose-of-alternatives-to-and-alternative-means.html The Impact Statement must then identify:	Section 3.2 Appendix C-2
	The criteria and parameters used to comparatively assess the alternative means based on their associated positive and adverse environmental, health, social and economic effects, impacts on the exercise of rights of Indigenous peoples as identified by the Indigenous group(s), technical and economic feasibility, and any other relevant factors;	Section 3.2 Appendix C-2
	▪ The methodology used to comparatively assess the alternatives means using the above parameters, including consideration of the trade-offs between the alternative means and the use of best available technology; and	Section 3.2.2 Section 3.2.4
	▪ The preferred alternative means of carrying out the Project including a rationale for its selection and the unacceptability of the excluded alternative means, that includes consideration of the above analysis.	Section 3.2.3 Section 3.2.5
	In its alternative means analysis, in addition to the potential environmental, health, social and economic effects, the proponent must address all project elements, including, but not limited to, the following project elements and components, where relevant to the Project activities and design:	
	▪ Highway route or corridor, including proposed widths of right-of-way, cleared area, and road surface;	Section 3.2
	▪ Choice of engineering and design standards for roads;	Appendix D-1
	▪ Access roads (permanent and temporary);	Section 3.4.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Location of borrow pits, quarries, and gravel pits:	Section 3.4.1 Section 3.4.2
	▫ include a description of how aggregate source alternatives were chosen, and identify where aggregate may be coming from eskers or other glacial deposits;	Section 3.4.1
	▪ Aggregate extraction activities (including extraction method, location and design of any facilities required to produce aggregate, location of aggregate stockpiles and management of waste materials):	Section 3.4.1
	▫ management of mobilized metals (such as chromium and other naturally occurring metals) from aggregate extraction and stockpiling activities;	Section 3.4.1
	▪ Route or corridor and means options for electrical transmission lines;	Section 3.4.1
	▪ Project site location;	Section 3.4.1
	▪ access to the project site;	Section 3.4.1
	▪ Location and type of bridges and culverts (permanent and temporary);	
	▪ Energy sources to power the project site, including worker camps;	Section 3.4.3
	▪ Location of other key project components;	Section 3.4
	▪ Management of water supply and wastewater;	Section 3.4.3
	▪ Management of solid wastes;	Section 3.4.3
	▪ Construction alternatives;	Section 3.4.3
	▪ Timing options for various components and phases of the Project; and	Appendix D-1
	▪ Suspension, abandonment or decommissioning options.	Not Applicable
	As relevant, the alternatives to and alternative means assessments should be informed by, but not limited to, the following:	
	▪ Any regional or strategic assessment;	Not Applicable No regional or strategic assessment were applicable to the assessment of alternatives
	▪ Any study or plan that is conducted or prepared by a jurisdiction—or an Indigenous governing body—in respect to the region related to the Project and that has been provided with respect to Project;	Not Applicable
	▪ Any relevant assessment of the effects of the Project that is conducted by or on behalf of an Indigenous governing body and that is provided with respect to the Project;	Not Applicable
	▪ Indigenous knowledge, community knowledge, comments received by the public, comments received from a jurisdiction; and	Section 2 Section 3
	▪ other studies or assessments realized by other proponents.	Section 3
	The proponent should refer to any current Agency guidance on this topic[12]. [12] https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guidance-need-for-purpose-of-alternatives-to-and-alternative-means.html	-

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
5	**Description of Public Participation and Views**	
	The proponent must demonstrate that they have meaningfully engaged with local communities, technical experts, the public, associations and stakeholders. The engagement activities are to prioritize the participation of those who are most affected by the proposed project, while also ensuring that interested members of the public have an opportunity to share their views.	Section 2.3 Section 2.4 Section 2.5 Section 2.6 Section 2.7 Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	The proponent must engage with the public and provide timely notification of proposed engagement activities to seek community knowledge and views on:	
	▪ Baseline conditions;	Section 2.5 Section 3.8 in Consultation Progress Reports – Rounds 1 and 2 Record of Engagement and Consultation
	▪ Valued components and indicators, taking into consideration the requirements under section 25 of this document;	Section 2.5 Section 3.8 in Consultation Progress Reports – Rounds 1 and 2 Record of Engagement and Consultation
	▪ Effects assessment and the assessment of the Project's contribution to sustainability;	Section 26 Record of Engagement and Consultation
	▪ Mitigation and follow-up measures; and	Appendix L Record of Engagement and Consultation
	▪ Conclusions.	Section 27 Record of Engagement and Consultation
	In addition to its own engagement activities, the proponent is expected to participate meaningfully in engagement activities outlined in the *Public Participation Plan*. The Agency will organize meetings, as per the *Public Participation Plan*, during which the proponent is expected to present information about the Project, including on baseline conditions, potential effects, assessment of effects and the assessment of the Project's contribution to sustainability, mitigation and follow-up measures, and its assessment conclusions. The proponent is expected to take into consideration the feedback received during these meetings as well as community knowledge in the development of the Impact Statement.	Section 2.4 to 2.5 Record of Engagement and Consultation
	The Agency expects the proponent to engage with, at a minimum, the members of the public listed in the *Public Partnership Plan*.	Section 2.3 to 2.5 Record of Engagement and Consultation

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
5.1	**Analysis and Response to Questions, Comments, and Issues Raised**	
	The Impact Statement must provide an analysis of the input received from local communities and other stakeholders (e.g., associations, non-government organizations, academics, industry and public). This analysis is to include all input received prior to, and since commencing, the impact assessment process. This analysis is to take into consideration the requirements under section 25 of this document, relating to the Project's contribution to sustainability. The Impact Statement and the analysis must include:	Section 2.5 Section 26.3 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▪ Issues, questions and comments raised by local communities and other stakeholders (associations, non-government organizations, academics, industry and public) during all engagement activities, by the proponent and when participating in Agency led engagement activities, and all proponent's responses, including how matters have been addressed in the Impact Statement, or will be addressed through the impact assessment process;	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▪ Where and how public perspectives and input, including community knowledge, were integrated into or contributed to decisions regarding the Project (e.g., project design), including:	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▫ scoping, development and collection of baseline information;	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	▫ design of studies conducted as part of the impact statement phase;	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ plans for construction (including location of project components), operation, and maintenance; and	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	▫ follow-up and monitoring.	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	▪ Where and how community knowledge and input were integrated in avoiding or mitigating identified effects; and	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	▪ Identify public concerns that were not addressed, if any, and provide reasons why the concerns were not addressed.	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	Any proposed mitigation measures are to be clearly linked, to the extent possible, to valued components in the Impact Statement as well as to specific project components or activities, as well as comments raised during engagement activities.	Section 2.5 Section 5 in Consultation Progress Reports – Rounds 1, 2 and 3 Record of Engagement and Consultation
	The Impact Statement should also provide details and commitments regarding how the public will be kept involved if the Project were to be approved and were to proceed, such as public involvement in follow-up and monitoring programs.	Section 2.5
	The proponent should refer to Agency guidance on this topic.[13] [13] Please refer to Agency guidance, including https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/impact-assessment-process-overview/phase5.html	-

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
5.2	**Record of Engagement**	
	The Impact Statement must provide a record of engagement that describes all efforts taken to seek the views of local communities and other stakeholders with respect to the Project. This record of engagement is to include all engagement activities undertaken prior to the submission of the Impact Statement, including prior to and during the Planning Phase, and in the preparation of the Impact Statement. The proponent's public engagement strategy will be informed in part by the Public Participation Plan issued by the Agency. The Impact Statement must include, at a minimum:	Section 2.6, Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▪ The list of local communities, associations, non-government organizations, academics, industry and stakeholders engaged by the proponent;	Section 2.3
	▪ The engagement activities undertaken by the proponent, including the methods used, where and when engagement activities were held, the persons, organizations and diverse groups engaged, and results of engagement;	Section 2.4.4 Section 2.5.1 Sections 3 and 4 in Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▪ A description of efforts made by the proponent to distribute project information and provide a description of information and materials that were distributed during the engagement process;	Section 2.4.4 Section 2.5.1 Section 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, and 4 in Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report
	▪ A description of efforts made by the proponent to engage diverse populations, including groups identified by gender, age or other community relevant factors (e.g., recreational hunters) to support the collection of information needed to complete the GBA+;	Section 2.3 in Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report Section 3 in Appendix L
	▪ A description of the efforts made by the proponent to gather community knowledge and public views to discuss valued components, indicators, potential positive and adverse effects from the Project, effects assessment, assessment of the Project's contribution to sustainability, mitigation and follow-up measures and assessment conclusions; and	Section 2.3 in Consultation Progress Reports – Rounds 1, 2, and 3 Section 3 in Appendix L
	▪ A description of the efforts made by the proponent to validate with communities and public stakeholders how community knowledge was applied to the selection of valued components, indicators, effects assessment, mitigation measures and follow-up programs, and conclusions.	Section 2.3 in Consultation Progress Reports – Rounds 1, 2, and 3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 3 in Appendix L Pending (for effects assessment, mitigation measures, follow-up and conclusions)
	In relation to the public record of engagement, appendices of the Impact Statement must include, at a minimum:	
	▪ Meeting summaries, including issues raised by local communities, associations, and stakeholders;	Section 2.4.5 Section 2.5.2 Section 2.6 Section 3 and 4 in Consultation Progress Reports – Rounds 1, 2, and 3 Cumulative Effects Assessment Consultation Report Record of Engagement and Consultation
	▪ Description of meetings, including but not limited to date, location, number of participants, affiliation and general information about sub-population represented;	
	▪ Comprehensive list of all comments brought forward; and	
	▪ Copies of the information and materials distributed at engagement activities, including, but not limited to, panels, presentations, and handouts.	Record of Engagement and Consultation
6	**Description of Engagement with Indigenous Groups**	
	The proponent must engage with all Indigenous groups that may be impacted by the Project. The Indigenous Engagement and Partnership Plan, issued by the Agency, is available to assist the proponent in further developing or refining their engagement strategy and supporting ongoing trust and relationship-building. In addition to the requirements set out in section 6.1, 6.2 and 6.3, the proponent must provide Indigenous groups with an opportunity to:	Section 2.3 Section 2.4
	▪ Provide Indigenous knowledge during baseline data collection;	Section 2.4.4.1 Section 2.4.4.2 Section 2.2, 2.3, 2.4, 3, and 4 in Consultation Progress Reports – Rounds 1, 2, and 3
	▪ Comment on the list of valued components and indicators;	
	▪ Inform the effects assessment and review its conclusions; and	Sections 6 to 20
	▪ Inform the development of mitigation measures and follow-up programs.	Sections 6 to 20 Appendix E Section 22
	In addition, the Agency will organize a series of meetings, as per the *Indigenous Engagement and Partnership Plan*, in coordination with the proponent, to discuss technical matters as it progresses through its baseline data collection, effects assessment, impacts on the exercise of Aboriginal and Treaty rights, and mitigation and follow-up development. After each stage of this process, the proponent will participate in meetings with the Agency, federal authorities and Indigenous groups to discuss technical matters. These meetings would be in addition to engagement with Indigenous groups, including community meetings, and discussions regarding Indigenous knowledge, which the proponent would undertake during the preparation of the Impact Statement. The purpose of these meetings is to provide all parties opportunities to discuss key technical issues during the preparation of the Impact Statement and do not reduce the expectations for engagement with Indigenous groups that the Agency has of the proponent as outlined in this document. The proponent must take into consideration the feedback received during these meetings in the development of the Impact Statement.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	The Agency requires the proponent to provide plain language documents such as the summary of the Impact Statement, impact assessment information, and project maps to the Indigenous groups identified in Section 4 of the *Indigenous Engagement and Partnership Plan*. Upon request from Indigenous groups, the proponent is also required to provide simultaneous translation for engagement sessions and plain language documents translated in Indigenous languages, to enable meaningful engagement with Indigenous groups.	Plain language summary is provided with the EAR/IS
	The Agency requires the proponent to engage with, at a minimum, the communities listed in the *Indigenous Engagement and Partnership Plan*. The proponent is expected to work with Indigenous groups to understand what kinds of approaches to engagement would create safe spaces for meaningful dialogue to enable full and free participation of all community members, including different sub-populations (e.g., Elders, women and youth), in the engagement process. The proponent must give consideration to culturally appropriate, gender sensitive, and trauma-informed and healing- centred engagement methods and approaches[14]. [14] https://www.nccih.ca/34/publications.aspx?sortcode=2.8.10&cat=22 https://www.canada.ca/en/public-health/services/publications/health-risks-safety/trauma-violence-informed-approaches- policy-practice.html https://www.sac-isc.gc.ca/eng/1576089685593/1576089741803	Section 2.3, Section 2.5
6.1	**Analysis of Potentially Impacted Indigenous Groups**	
	In addition to the Crown's preliminary scope of consultation as set out in the Indigenous Engagement and Partnership Plan, the preliminary list should be revisited as necessary during the course of the impact assessment process as new information comes to light. In undertaking its Indigenous engagement activities, the proponent may decide to augment this list with additional Indigenous groups, as necessary. In all cases, cultural and ethical protocols for the collection, analysis and reporting of information must be respected[15]. The Impact Statement must describe the proponent's analysis and rationale used to identify additional Indigenous groups that may be impacted by the Project or otherwise engaged on the Project. [15] https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html https://fnigc.ca/ocap	Section 2.3.1
	This analysis must include:	
	▪ The list of Indigenous groups potentially impacted by the Project;	Section 2.3.1
	▪ The source of information and analysis used in creating the list of potentially impacted Indigenous groups;	Section 2.3
	▪ A list of potential effects on the environmental, health, social and economic conditions of each Indigenous group, including sub-populations (e.g., Indigenous women and youth) that may be differentially impacted by the Project, and the predicted degree (e.g., high, moderate, low) of those effects and resulting impacts on the exercise of Aboriginal and Treaty rights;	Section 14.3 Section 14.5 Section 15.3 Section 15.5 Section 17.3 Section 17.5 Section 19.3
	▪ The rights of each Indigenous group, that the groups themselves have identified, that may be impacted by the Project; and	Section 19.5
	▪ The sources of information and analysis used to determine the extent of the potential effects on each Indigenous group.	Section 19.2
6.2	**Analysis and Response to Questions, Comments, and Issues Raised**	
	The Impact Statement must provide an analysis of the input received from all Indigenous groups and sub-populations (e.g., Indigenous women and youth) that may be differentially impacted by the Project, with respect to the Project. This analysis is to include all input received by Indigenous groups prior to, and since commencing, the impact assessment process. This analysis is to include, and not be limited to, the identification of potential effects and impacts, including impacts on the exercise of Aboriginal and Treaty rights and the identification of specific valued components where appropriate.	Sections 6.1.2, 6.1.3, 7.1.2, 7.1.3, 8.1.2, 8.1.3, 9.1.2, 9.1.3, 10.1.2, 10.1.3, 11.1.2, 11.1.3, 12.1.2, 12.1.3, 13.1.2, 13.1.3, 14.1.2, 14.1.3, 15.1.2, 15.1.3, 16.1.2,

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		16.1.3,17.1.2, 17.1.3, 18.1.2, 18.1.3, 19.1.2, 19.1.3, 20.1.2, 20.1.3 Section 23.2.1 Section 24.1.4
	The analysis in the Impact Statement must also include consideration of Indigenous knowledge provided by Indigenous groups. Indigenous knowledge where written consent has not been provided by the Indigenous group(s) should not be included. Permission from the Indigenous group should be sought before including Indigenous knowledge in the Impact Statement, regardless of the source of the Indigenous knowledge.	Sections 6.1.2, 7.1.2, 8.1.2, 9.1.2, 10.1.2, 11.1.2, 12.1.2, 13.1.2, 14.1.2, 15.1.2, 16.1.2, 17.1.2, 18.1.2, 19.1.2, 20.1.2, 21.2, 22.2, 23.2.1, 24.1.3
	Indigenous knowledge is holistic and in IA, it can provide insights related to knowledge of the environment, social, cultural, economic, health, Indigenous governance and resource use. It is important that Indigenous knowledge be included for all of these aspects of the technical assessments, not only to look at potential impacts of the Project on Indigenous peoples. Given the holistic nature of Indigenous knowledge, it may be presented in one section of the Impact Statement. That said, it should also, as applicable be considered in technical sections or chapters (e.g., baseline data on fish and fish habitat would include baseline information gathered through collection of Indigenous knowledge). It is also important to capture the context in which Indigenous groups provide their Indigenous knowledge and to convey it in a culturally appropriate manner.	Sections 6 to 20, Section 23 Section 24 Section 26 Appendix F Appendix L Appendix M
	The Impact Statement must also document how the proponent responded to questions, comments and issues raised by Indigenous groups, and how unresolved matters have been addressed. Any proposed mitigation measures are to be clearly linked, to the extent possible, to valued components in the Impact Statement as well as to specific project components or activities. The analysis and responses are to include:	
	▪ A comprehensive list of all issues, questions and comments raised during the engagement activities by each Indigenous group and the proponent's responses, including how matters have been addressed in the Impact Statement or will be addressed through the impact assessment (including but not limited to avoidance, mitigation or other measures to address potential effects or impacts on the exercise of rights of Indigenous peoples);	Section 2.4.5 Section 2.5.2 Sections 6 to 27 Appendix F Appendix L Appendix M
	▪ A detailed and comprehensive consultation work plan describing all future planned engagement activities and timelines, including specific engagement activities tailored to youth, women and Elders, and if none are planned, rationale for not undertaking future engagement activities;	Section 2.7 Appendix N
	▪ A description of meetings, including but not limited to date, location, number of participants, affiliation and general information about sub-population represented (e.g., youth, Elders, women, etc.);	Section 2.4 Section 2.5 Section 14 Section 15 Record of Engagement and Consultation
	▪ Copies of the information and materials distributed at engagement activities, including, but not limited to, panels, presentations, and handouts as well as information about documents provided in Indigenous languages or meetings held in Indigenous languages (e.g., where simultaneous translation is provided).	Record of Engagement and Consultation

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ If engagement with certain Indigenous groups is not possible, rationale must be provided, including, as applicable, an outline of efforts made;	Section 2.3
	▪ Where and how Indigenous groups' knowledge, perspectives and input were integrated into or contributed to decisions regarding the Project (e.g., project design), including:	
	▫ scoping, development and collection of baseline information;	Section 4 Appendix F Appendix L
	▫ plans for construction, operation, decommissioning, abandonment, and maintenance; and	Section 4
	▫ follow-up and monitoring.	Section 22
	▪ Where and how Indigenous groups' knowledge, perspectives and input were integrated in the characterization of the nature of environmental, health, social and economic effects and impacts expected from the Project for each Indigenous group;	Sections 6 to 27 Appendix F Appendix L Appendix M
	▪ Where and how Indigenous groups' perspectives and Indigenous knowledge and input were integrated in avoiding, mitigating or accommodating identified effects and impacts;	Sections 6 to 27 Appendices M to S
	▪ Where potential impacts on rights of Indigenous peoples are identified, provide a description of how each potential impact would be avoided, managed, mitigated, or accommodated (and provide this information for each Indigenous group separately); and	Section 19.4
	▪ Identify any interest from Indigenous groups or effort made to collaborate on the effects assessment of the Project, including consideration of subsection 22(1)(q) of IAA.	Section 2 Section 19 Record of Engagement and Consultation
	The proponent should discuss and, if requested, establish confidentiality agreements with any Indigenous group that share confidential information to inform the impact assessment.	Section 2.4.2
	In the Impact Statement, the proponent is required to describe the type of confidential information provided by each Indigenous group without compromising stipulations in the confidentiality agreements and state how that information impacted the project design, baseline data, effects assessment or mitigation measures. The proponent is required to provide evidence to the Agency in the form of a letter from the Indigenous group that provided confidential information confirming that:	
	▪ The Indigenous group that provided confidential information is satisfied with the way the Impact Statement was informed;	Section 2.4
	▪ The Indigenous group that provided confidential information is satisfied with the way the issue was solved or addressed.	Section 2.4
	The proponent should refer to Agency guidance on these topics and must respect ethical and cultural protocols when gathering, storing and reporting Indigenous knowledge.	Section 2.2
6.3	**Record of Engagement**	
	The Impact Statement must provide a record of engagement that describes all efforts, successful and unsuccessful, taken to seek the views of each potentially affected Indigenous group with respect to the Project. This record of engagement is to include all engagement activities undertaken prior to the submission of the Impact Statement during the planning phase and in the preparation of the Impact Statement. The Impact Statement must include, at a minimum:	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ The list of Indigenous groups engaged by the proponent, including those that chose not to engage in the impact assessment process;	Section 2.3 Record of Engagement and Consultation
	▪ The list of Indigenous groups engaged by the proponent that requested specific consultation protocols or confidentiality agreements;	Section 2.2 Section 2.3 Record of Engagement and Consultation
	▪ The description of the effort made by the proponent to gather comments on the potential location of project components, as well as a description of the input provided by Indigenous groups in response and how responses influenced the location and design of project components (including but not limited to road corridor, aggregate pits, quarries, temporary roads, worker camps);	Section 2.4.4 Section 2.4.5 Section 2.5.2 Record of Engagement and Consultation
	▪ The engagement activities undertaken with each Indigenous group, including the date, means and results of engagement. Include a description of efforts to engage with groups that chose not to engage in the impact assessment process;	Section 2.3 Record of Engagement and Consultation
	▪ A description of efforts to engage diverse populations of each Indigenous group in culturally appropriate ways, including groups identified by gender, age or other community relevant factors (e.g., hunters, trappers, and other harvesters) to support the collection of information needed to complete the GBA+;	Section 2.4 Section 2.5 Record of Engagement and Consultation
	▪ A description of how engagement activities by the proponent were intended to ensure Indigenous groups were provided an opportunity to comment on the Project's effects, including potential positive and negative consequences, and impacts on the exercise of their rights, as identified by the Indigenous group; and	Section 2.4 Section 2.5 Record of Engagement and Consultation
	▪ A description of the efforts to discuss and validate with Indigenous groups how the information they provided was applied to the selection of valued components, indicators, effects assessment, mitigation measures and follow-up programs, and conclusions.	Section 2.4 Section 2.5 Record of Engagement and Consultation
	In relation to the record of engagement of Indigenous groups, appendices of the Impact Statement must include, at a minimum:	
	▪ All meeting summaries and responses to input received from Indigenous groups; and	Record of Engagement and Consultation
	▪ Copies of material used at each meeting, including panels, presentations, handouts (if the same documents were used in each meeting, one set of documents can be appended to the Impact Statement with an indication of which Indigenous groups received the material).	Record of Engagement and Consultation
7	**Baseline Conditions**	
7.1	**Methodology**	
	The Impact Statement must provide a description of the environmental, health, social and economic setting directly and incidentally related to the Project. This should include the existing environmental, health, social and economic components, interrelations and interactions as well as the variability in these components, processes and interactions over time scales and geographic boundaries appropriate to the Project, including consideration of variability due to potential future climate change.	Appendix F Appendix L

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	Baseline data can include past conditions to reveal spatial or temporal patterns or trends. Information on past conditions may also help establish if present-day conditions are likely to be stable and how they may be impacted by the Project. Meaningful, two-way dialogue with local communities, including municipalities, and Indigenous groups provides input that may describe how these components and processes are interrelated.	Section 2.4 Appendix F Appendix L
	The information describing the existing baseline conditions may be provided as a stand-alone chapter in the Impact Statement or integrated into clearly defined sections for relevant valued components, including effects assessment of each valued component and valued component interactions, identification of mitigation measures, residual effects analysis and cumulative effects assessment.	Sections 6 to 23 Appendix F Appendix L Appendix M
	The application of GBA+ to baseline conditions for diverse subgroups is necessary to support the GBA+ of effects. GBA+ uses standard social science quantitative and qualitative data collection and analysis methods to describe baseline conditions across diverse subgroups.	Appendix L Appendix M
	There is no need for the Impact Statement to provide detailed descriptions of existing features of environmental, health, social or economic components that would not be impacted by the Project as determined by the Agency through engagements with federal authorities, lifecycle regulators, Indigenous groups, the public and interested parties.	-
	In describing the biophysical environment, the Impact Statement must take an ecosystem approach that considers how the Project may affect the structure and functioning of biotic and abiotic components with the ecosystem using scientific, community and Indigenous knowledge regarding ecosystem health and integrity, as applicable. The Impact Statement must provide a description of the indicators and measures used to determine ecosystem health and integrity, identified during early planning and reflected in the TISG. The presence of habitat (e.g., federal[16], provincial, or Indigenous protected areas, ANSIs[17], RAMSAR sites[18], critical habitat identified under the Species at Risk Act, etc.), such as but not limited to spawning shoals, aquatic vegetation or overwintering pools, potentially effected by the Project should be included in the description of the biophysical baseline conditions. [16] https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-conserved-areas-database.html [17] https://www.ontario.ca/page/ontarios-parks-and-protected-areas#section-4 [18] https://www.ramsar.org/wetland/canada	Sections 10 to 13 Appendix F
	The Impact Statement must consider the resilience of relevant species populations, communities and associated habitats to the effects of the Project. Ecological processes should be evaluated for potential susceptibility to adverse effects from the Project. Considerations include: patterns and connectivity of habitat patches; continuation of key natural disturbance regimes; structural complexity; hydrogeological or oceanographic patterns; nutrient cycling; abiotic-biotic and biotic interactions; population dynamics, genetic diversity, Indigenous knowledge relevant for the conservation and sustainable use of relevant species populations, communities and associated habitats.	Sections 10 to 13 Appendix F
	If the baseline data have been extrapolated or otherwise manipulated to depict environmental, health, social and/or economic conditions within the study area, modelling methods must be described and must include assumptions, calculations of margins of error and other relevant statistical information. Models that are developed should be validated using field data from the appropriate local and regional study areas. Ensure baseline data is representative of project site conditions. If surrogate data from reference sites are used rather than site-specific surveys, the proponent should demonstrate that the data are representative of project site conditions.	Sections 6 to 20 Appendix F Appendix L
	The Impact Statement must establish appropriate study area boundaries to describe the baseline conditions. The study area boundaries need to encompass the spatial boundaries of the Project, including any associated project components or activities, and the anticipated boundaries of the Project effects, including all potentially impacted local communities, municipalities and Indigenous groups. Considerations in assigning appropriate study areas or boundaries would include, but not be limited to:	
	▪ Areas potentially effected by changes to water quality and quantity or changes in flow in the watershed and hydrologically connected waters;	Section 7.1.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Areas potentially effected by airborne emissions or odours;	Section 9.1.5
	▪ Areas determined by dispersion and deposition modelling;	Section 9.1.5
	▪ Areas within the range of vision, light and sound and the locations and characteristics of the most sensitive receptors;	Section 9.1.5
	▪ Species habitat areas, usage timing and migratory patterns;	Section 10.1.5 Section 12.1.5 Section 13.1.5
	▪ Emergency planning and emergency response zones;	Section 4 Section 23 Appendix E
	▪ The geographic extent of local and regional services;	Section 14.1.5
	▪ Any impacted local communities, including municipalities;	Section 2.3 Sections 6 to 21 (refer to Scope of the Assessment)
	▪ All potentially impacted Indigenous groups;	Section 2.3 Section 19.1.5
	▪ Areas of known Indigenous land, cultural, spiritual and resource use; and	Sections 19 to 20
	▪ Existing effected infrastructure.	Section 4 Section 14 Section 16
	Where baseline data are available in geographic information system (GIS) format, this information is to be provided to the Agency as electronic geospatial data file(s) compliant with the ISO 19115 standard[19]. This would support the Government of Canada's commitment to Open Science and Data and would facilitate the sharing of information with the public through the Canadian Impact Assessment Registry Internet Site and the Government's Open Science and Data Platform. The Agency intends to make the geospatial data files available to the public under the terms of the Open Government License – Canada[20]. [19] https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16553 [20] https://open.canada.ca/en/open-government-licence-canada	Pending
7.2	**Sources of baseline information** Information sources and data collection methods used for describing the baseline environmental, health, social and economic setting may consist of the following sources of information. For specific sources of baseline information, see Appendix 1 of the TISG.	
	▪ Federal government (e.g., Environment and Climate Change Canada, Health Canada, Indigenous Services Canada, Statistics Canada, Women and Gender Equality Canada);	Appendices F to M Appendices O to S
	▪ Ontario provincial government (e.g., Ministry of Environment, Conservation, and Parks, Ministry of Natural Resources and Forestry;	Appendices F to M Appendices O to S
	▪ Bird Conservation Region plans[21]; [21] https://www.canada.ca/en/environment-climate-change/services/migratory-bird-conservation/regions-strategies.html	Appendix F
	▪ Academic institutions;	Appendices F to M Appendices O to S
	▪ Field studies, including site-specific survey methods;	Appendix F Appendix J

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Appendices K-4 to M Appendices O to S
	▪ Database searches, including:	
	▫ federal, provincial, territorial, municipal and local data banks;	Appendices F to M Appendices O to S
	▫ Breeding Bird Atlas - Ontario (2001-2005)[22] [22] http://www.birdsontario.org/atlas/maps.jsp?lang=en	Appendix F
	▪ Monitoring program databases protected areas, watershed or coastal management plans;	Appendices F to K
	▪ Natural resource management plans;	Appendix F
	▪ Species recovery and restoration plans;	Appendix F
	▪ Field measurements to gather data on ambient or background levels for air, water, soil and sediment quality, light levels or acoustic environment (soundscape);	Appendix F Appendix G Appendix H
	▪ Land cover data, including:	
	▫ terrestrial ecosystem mapping products;	Appendix F
	▫ forest cover maps;	Appendix F
	▫ remote sensing resources;	Appendix F
	▫ important habitats and features to include:	
	– water bodies, wetlands, watercourses;	Appendix F
	– riparian habitat;	
	– riverbanks or other eroded habitats;	
	– artificial water sources;	
	– forest, tree patches, solitary trees (especially old decaying trees);	
	– forest edges and tree rows;	
	– ridges, including eskers;	
	– caves and mines;	
	– cliffs, rock outcrops, exposed bedrock, talus, and other karst topography;	
	– buildings, bridges, and other anthropogenic features, including linear features;	
	– sources of artificial lighting attracting insects;	
	– critical habitat; and	
	– and any other habitat features known to be important in the area.	
	▪ Published literature, such as peer reviewed journals, reports by think tanks, non- government organizations and government reports;	Sections 6 to 20 (refer to Methods) Appendices F to S (refer to Methods)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Environmental assessment documentation, including monitoring reports, from prior projects in the area and similar projects outside the area;	Appendix C-1
	▪ Regional studies, project assessments and strategic assessments;	Section 21 Section 15
	▪ Renewable harvest data;	Not applicable
	▪ Indigenous knowledge, including oral histories and knowledge gathered by spending time on the land with knowledge holders;	Section 6.1.2 and 6.1.3 Section 7.1.2 and 7.1.3 Section 8.1.2 and 8.1.3 Section 9.1.2 and 9.1.3 Section 10.1.2 and 10.1.3 Section 11.1.2 and 11.1.3 Section 12.1.2 and 12.1.3 Section 13.1.2 and 13.1.3 Section 14.1.2 and 14.1.3 Section 15.1.2 and 15.1.3 Section 16.1.2 and 16.1.3 Section 17.1.2 and 17.1.3 Section 18.1.2 and 18.1.3 Section 19.1.2 and 19.1.3 Appendix F
	▪ Community based monitoring and studies conducted by Indigenous communities (e.g., monitoring of Lake Sturgeon conducted by Weenusk First Nation);	Appendix F Appendix L
	▪ Expert, community, public and Indigenous engagement and consultation activities, including workshops, meetings, open houses, surveys;	Sections 2.4 and 2.5
	▪ Qualitative information gathered from interviews, focus groups or observation;	Sections 6 to 20 (refer to Methods) Appendies F to S (refer to Methods)
	▪ Census data;	Section 14 Section 15 Appendix L Appendix M
	▪ Baseline human health risk assessments;	Appendix P
	▪ Community and regional economic profiles;	Section 15 Appendix L
	▪ Community well-being studies; and	Section 14 Appendix L Appendix M
	▪ Statistical surveys, as applicable.	Section 15 Appendix L

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	The Impact Statement must provide detailed descriptions of specific data sources, data collection, sampling, survey and research protocols and methods followed for each baseline environmental, health, social and economic condition that is described, in order to corroborate the validity and accuracy of the baseline information collected.	Sections 6 to 20 (refer to Methods) Appendices F to S (refer to Methods)
	Data directly relevant to the area surrounding the Project are limited. With the exception of existing count data that have been collected within the regional study area, the use of existing information sources should be limited to the goals of estimating the species likely to occur in the study areas, and to identifying the potential timing of migration passage (for species that migrate through) or the general dates of breeding (for species that breed in the area).	Section 10 Section 12 Section 13 Appendix F
	If using existing data sources, the Impact Statement must provide justification to show that the data sources are relevant in spatial and temporal coverage to the Project. Some data sources may have good coverage in Southern Ontario or existing road networks but be unsuitable as a baseline for these northern areas where there are not roads.	Section 14 Section 15 Appendix L
	Consult the Species at Risk Public Registry for information on the list of species at risk and available recovery documents and reference the documents and dates consulted. Ensure the most up to date documents are used and species statuses are up to date[23]. [23] https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html	Section 13
	With regard to field studies, survey work must be planned to include multiple sampling locations and multiple visits to each location to support all required assessment analyses. Existing data should be considered as a limited augmentation of this new data. See the "Establishing Baseline Conditions" (sections 8.5, 8.9, 8.10, 8.11) in this Tailored Impact Statement Guidelines for recommendations on survey design and methodology. Surveys and analyses should be conducted by qualified experts.	Sections 6 to 20 (refer to Methods) Appendices F to S (refer to Methods)
	Baseline data must be collected in a manner that enables reliable analysis, extrapolations and predictions. Resulting data should be suitable for analyses to estimate pre-project baseline conditions, derive predictions of impacts, and evaluate and compare post-project conditions and at scales of within and across the Project, Local and Regional Assessment areas. Modelling methods, error estimates and assumptions should be reported (as per section 7.1 of the TISG). Modelling and simulations should be used early in the planning phase to estimate the necessary sampling intensity and to quantitatively evaluate the effectiveness of design options. Ethical guidelines and relevant cultural protocols governing research, data collection and confidentiality must be adhered to.	
7.3	**Consideration and Methodology in Selecting Valued Components**	
	The list of valued components must be informed, validated and finalized through engagement with the public, Indigenous groups, lifecycle regulators, jurisdictions, federal authorities, and other interested parties. The Impact Statement must describe valued components, processes, and interactions that are identified to be of concern or that the Agency considers likely to be impacted by the Project and are included in the Guidelines.	Section 2.2 Sections 2.4 and 2.5 Record of Engagement and Consultation
	The Impact Statement must indicate to whom these concerns are important (e.g., the public, federal authorities or Indigenous groups) and the reasons why, including environmental, cultural, spiritual, historical, health, social, economic, recreational, aesthetic considerations, Indigenous knowledge, and their relation to the exercise of Aboriginal and Treaty rights. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. Valued components included in the Guidelines are, in part, based on what local communities, including municipalities, and Indigenous groups identify as valuable to them in the planning phase.	
	Accordingly, the Impact Statement must provide the rationale for selecting specific valued components and for excluding any valued components or information specified in the Guidelines. The priority in selecting valued components to be included and assessed should be project-specific and focused on appropriateness, not influenced by the quantity of information available or the use of the valued components in other assessments.	Section 2.2 Sections 2.4 and 2.5 Record of Engagement and Consultation

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	In selecting a valued component to be included, the following factors should be considered:	Section 2.2 Sections 2.4 and 2.5 Record of Engagement and Consultation
	▪ Valued component presence in the study area;	
	▪ The extent to which the valued component is linked to the interests or exercise of Aboriginal and Treaty rights of Indigenous peoples, and whether an Indigenous group has requested the valued component;	
	▪ The extent to which the effects (real or perceived) of the Project and related activities have the potential to interact with the valued component;	
	▪ The extent to which the valued component may be under cumulative stress from other past, existing or future undertakings in combination with other human activities and natural processes;	
	▪ The extent to which the valued component is linked to federal, provincial, territorial or municipal government priorities (e.g., legislation, programs, policies);	
	▪ The extent to which the valued component is being addressed through any ongoing or completed regional assessment processes;	
	▪ The possibility that adverse or positive effects on the valued component would be of particular concern to Indigenous groups, the public, or federal, provincial, territorial, municipal or Indigenous governments; and	
	▪ Whether the potential effects of the Project on the valued component can be measured and/or monitored or would be better ascertained through the analysis of a proxy valued component.	
	The valued components must be described in sufficient detail to allow the reviewer to understand their importance and to assess the potential adverse and positive environmental, health, social and economic effects and impacts arising from the Project activities.	Sections 6 to 20 (refer to Valued Components and Indicators)
	For each of the valued components that will be assessed in the Impact Statement, the proponent must create a study plan and a work plan to be validated by the Agency. Upon receipt of a study plan, the Agency may request that the proponent present and discuss the study plan at technical meetings, which will be scheduled during the impact statement phase.	Record of Engagement and Consultation
7.4	**Spatial and Temporal Boundaries**	
	The spatial and temporal boundaries determined and established for the impact assessment will vary depending on the valued component and are considered separately for each valued component, including valued components related to the environmental, health, social and economic conditions of Indigenous peoples, or other potential effects and impacts referred to above. The spatial and temporal boundaries to be used in the impact assessment are outlined and discussed through the tailoring process, and include comments and input from federal and provincial government departments and agencies, local government, Indigenous groups, the public and other interested parties. The proponent should engage with Indigenous groups when defining spatial and temporal boundaries for valued components, especially for those that are identified by Indigenous groups. The proponent should validate with the Agency the spatial and temporal boundaries for each valued component.	Section 5.2.1.4 Section 6.1.5 Section 7.1.5 Section 8.1.5 Section 9.1.5 Section 10.1.5 Section 11.1.2 Section 12.1.6 Section 13.1.5 Section 14.1.5 Section 15.1.5 Section 16.1.5 Section 17.1.4 Section 18.1.5 Section 19.1.6 Section 20.1.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
7.4.1	**Spatial Boundaries**	
	The Impact Statement must describe the spatial boundaries, including project, local and regional study areas, for each valued component included in assessing the potential adverse and positive environmental, health, social and economic effects of the Project and provide a rationale for each boundary. Spatial boundaries are defined taking into account the appropriate scale and spatial extent of potential effects and impacts of the Project; community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; and physical, ecological, technical, social, health, economic and cultural considerations. The size, nature and location of past, present and foreseeable future projects and activities are factors that should be included in the definition of spatial boundaries. It should be noted that in some cases, spatial boundaries might extend to areas outside of Canada. These transboundary spatial boundaries should be identified where transboundary effects are expected.	Section 6.1.5.1 Section 7.1.5.1 Section 8.1.5.1 Section 9.1.5.1 Section 10.1.5.1 Section 11.1.2.1 Section 12.1.6.1 Section 13.1.5.1 Section 14.1.5.1 Section 15.1.5.1 Section 16.1.5.1 Section 17.1.4.1 Section 18.1.5.1 Section 19.1.6.1 Section 20.1.5.1
	For valued components establish three study area spatial boundaries to assess impacts to each valued component:	
	1) Project Study Area: defined as the project footprint for each alternative route;	Section 6.1.5 Section 7.1.5 Section 8.1.5 Section 9.1.5 Section 10.1.5 Section 11.1.2 Section 12.1.6 Section 13.1.5 Section 14.1.5 Section 15.1.5 Section 16.1.5 Section 17.1.4 Section 18.1.5 Section 19.1.6 Section 20.1.5
	2) Local Study Area: defined for each valued component – see below;	
	3) Regional Study Area: defined for each valued component – see below	
	Provide a rationale for boundaries of the project study area, local study area, and regional study area for each valued component and indicate how the above objectives were met in establishing the boundaries.	
	For biophysical valued components, spatial boundaries should be defined using an ecosystem- centered approach for the project study area, local study area, and regional study area, as wetlands and eskers are features that are likely to be most effected. Ecoregion boundaries or their derivatives should not be used since the Project occurs on, near and across ecoregion boundaries. See Technical Guidance for Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012 for more guidance on determining spatial boundaries.[24] [24] Until the Agency releases Technical Guidance under the *Impact Assessment Act*, refer to Technical Guidance of Assessing Cumulative Effects under the *Canadian Environmental Assessment Act, 2012*: https://www.canada.ca/en/impact- assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-ceaa2012.html	
	Delineate spatial boundaries (i.e., regional study area, local study area, and project study area) to meet the following objectives:	
	a. range of land cover types should be representative of the defined spatial extent;	
	b. the spatial pattern of the land cover types should be well distributed across the defined spatial extent (e.g., revise if one or more land cover types is concentrated in one sub-area and uncommon in other parts of the area); and	
	c. low to moderate rate of change in the prevalence of one or more land cover types with increasing distance from the (i.e., to use land cover patterns to constrain the distances within which comparisons should be made).	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	For Habitat valued components: The spatial extent of the habitat and the habitat functions should influence the determination of an appropriate local study area and regional study area, considering objectives a-c above. The local study area should be at a minimum: project study area plus a 500- metre buffer. For habitat valued components potentially effected by the Project, a land cover analysis should be conducted to determine if a 500-metre buffer appropriately reflects ecological boundaries.	Sections 10 to 13 (refer to Spatial and Temporal Boundaries)
	For Species valued components: The local study area should correspond to the project study area plus a buffer defined with objectives a-c above. Use simulation modeling to help define a buffer that captures objectives a-c for each species or species group.	
	Contact provincial and/or local government authorities to verify appropriate boundaries for wildlife species. Guidance for specific species of interest have been listed below:	
	▪ For wolverine, the local study area should be at a minimum: project study area plus a 10- kilometre buffer. Simulation modeling may indicate a larger buffer;	Sections 12 and 13 (refer to Spatial and Temporal Boundaries)
	▪ For bats, the local study area should be at a minimum: project study area plus a 1-kilometre buffer. Simulation modelling may indicate a larger buffer; and	
	▪ For caribou, the local study area should be at a minimum: project study area plus a 10-40- kilometre buffer. Simulation modeling may indicate a larger buffer. In addition to assessing project and cumulative effects at the scale of the three study areas defined above, also assess at the scale of the implicated Ontario caribou ranges (Missisa and Ozhiski), and the federal Far North caribou range.	
7.4.2	**Temporal Boundaries**	
	The temporal boundaries of the impact assessment span all phases of the Project determined to be within the impact assessment. If potential effects are predicted after project decommissioning or abandonment, this should be taken into consideration in defining specific boundaries. In order to assess a project's contribution to sustainability, consideration should be given to the long-term effects on the well-being of present and future generations. When defining temporal boundaries, the proponent should consider how elements of environmental, health, social and economic well-being that local communities, including municipalities, and Indigenous groups identify as being valuable could change over time.	Section 6.1.5.2 Section 7.1.5.2 Section 8.1.5.2 Section 9.1.5.2 Section 10.1.5.2 Section 11.1.2.2 Section 12.1.6.2 Section 13.1.5.2 Section 14.1.5.2 Section 15.1.5.2 Section 16.1.5.2 Section 17.1.4.2 Section 18.1.5.2 Section 19.1.6.2 Section 20.1.5.2 Section 26
	For valued components related to wetlands, eskers, birds, wildlife, and Species at Risk, define temporal boundaries in a manner that enables detection of all species that use the project study area, local study area, and regional study area throughout the year and between years, and to estimate their temporal pattern of use (e.g., breeding, or migrants stopping on northward and/or southward migration). Baseline data collection for all biophysical valued components is to be provided for a minimum of two years, unless specified otherwise. Temporal boundaries spanning more than one year will enable accounting for variation due to irregular events (e.g., masting events, storms on migration, late snowfalls).	Section 10.1.5.2 Section 11.1.2.2 Section 12.1.6.2 Section 13.1.5.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
8	**Baseline Conditions – Biophysical Environment**	
	Impact Statement requirements for baseline conditions of the biophysical environment are described below. Additional guidance regarding baseline information collection is identified in Appendix 1 of the TISG.	Sections 9 to 13
8.1	**Atmospheric, Acoustic, and Visual Environment**	
	The Impact Statement must:	
	▪ Provide the results of a baseline survey of ambient air quality by identifying and describing emission sources for the following contaminants: total suspended particulates, fine particulates smaller than 2.5 microns (PM2.5), respirable particulates of less than 10 microns (PM10), carbon monoxide (CO), ozone, sulphur oxides (SOx), nitrogen oxides (NOx), volatile organic compounds (VOCs)[25], polycyclic aromatic hydrocarbons (PAHs), diesel particulate matter (DPM), and any other toxic air pollutants (mobile and stationary sources); [25] It is recommended to assess specific aldehydes that are associated with diesel exhaust (DE), such as acetaldehyde, formaldehyde, 1,3-butadiene and acrolein, as well as benzene, for the evaluation of VOCs.	Section 9.2.2
	▪ For air pollutants with numerical standards and/or established air quality criteria, [e.g., Canadian Ambient Air Quality Standards (CAAQS), or Ontario Ambient Air Quality Criteria (AAQC)], observe the averaging time period and the statistical form associated with each numerical standard;	Section 9.2.2
	▪ Address seasonal variability in the baseline survey and include a determination of background or ambient contaminant concentrations at key receptor points (e.g., traditional land users, sensitive human receptors such as daycares, schools, hospitals, community centres, retirement complexes or assisted care homes) with monitoring data of appropriate duration, representativeness, data completeness, data validation and quality control, baseline air quality monitoring is to be provided for a minimum of one year to represent seasonal variability;	Section 9.2.2
	▪ Provide dispersion modelling of a base case to account for existing pollutant sources and to determine the spatial distribution of pollutants within the study area;	Section 9.3.1
	▪ Describe all direct and indirect sources of baseline air emissions, including mobile, stationary and fugitive;	Section 9.2.1.1 Section 9.2.2.1
	▪ Provide current ambient noise levels at key receptor points to traditional land users and sensitive human receptors, including the results of a baseline ambient noise survey and permissible sound levels for each receptor. Information on typical sound sources (both natural and anthropogenic), geographic extent and temporal variations will be included. When collecting baseline ambient noise survey data at human receptor locations, consider the following recommended questions:	
	▫ Does the community or land users value certain non-anthropogenic (i.e., natural) sounds?	Section 9.2.1.3
	▫ Is there an expectation of quiet at any specific locations or times?	Section 9.2.1.3
	▫ What are typical sleep hours (10pm to 7am being the default assumption)?	Section 9.2.1.3
	▫ What is the baseline prevalence of noise annoyance toward existing noise sources (e.g., road traffic, aircraft, and other industrial sounds)?	Section 9.2.1.3
	▪ For the aquatic environment, provide current underwater soundscape and vibration descriptions of the study area and at the project site from various sources based on acoustic measurements. Provide information on vibration and sound sources, geographic extent and spatial and temporal variations within the water column;	Section 9.2.1.3
	▪ Describe existing ambient nighttime light levels at the project site and at any other areas where project activities could have an effect on light levels. The Impact Statement will describe night-time illumination levels during different weather conditions and seasons; and	Section 9.2.2.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality (e.g., dust deposition on vegetation), and noise levels. At minimum, provide a map showing approximate locations of permanent residences, temporary land uses (e.g., cabins and traditional sites) and known locations of sensitive human receptors (e.g., schools, hospitals, community centres, retirement complexes or assisted care homes).	Section 9.3
8.2	**Meteorological Environment**	
	The Impact Statement must:	
	▪ Describe the local and regional climate including historical records of relevant meteorological information (e.g., total precipitation (rain and snow));	Appendix F Appendix I
	▪ Provide mean, maximum and minimum temperatures;	
	▪ Provide typical wind speed and direction;	
	▪ Identify the potential for extreme weather events such as, wind, precipitation and temperature extremes;	
	▪ Provide hourly meteorological data (wind speed and direction, air temperature, net radiation, turbulence and precipitation data) from a minimum of one year to support dispersion modelling that captures the normal variability of meteorological conditions; and	
	▪ Provide pan evaporation measurements or estimates of monthly (or daily) evapotranspiration.	
8.3	**Geology, Geochemistry and Geological Hazards**	
	The Impact Statement must:	
	▪ Describe the bedrock geology and lithological units, including a summary table of geologic descriptions, mineralization styles (if applicable) supported by geological maps and cross- sections at appropriate scale (normally 1:50 000). Provide in the table an inferred risk rating (i.e., low, medium, high) for acid rock drainage and metal leaching potential based on the desk-top review of bedrock geology and mineralization;	Section 6.2.2 Section 4.3 in Appendix F
	▪ Provide written description and maps of the current location of eskers and other post-glacial deposits on a map;	Section 6.2.2.6
	▪ Identify any geological hazards that exist in the areas planned for the project facilities and infrastructure, including:	Section 6.2.2.4
	▫ history of seismic activity in the area, including induced earthquakes, and secondary effects such as the risk of, landslides and liquefaction;	Section 6.2.2.4
	▫ evidence of active faults;	Section 6.2.2.1.2
	▫ isostatic rise or subsidence; and	Section 4.3.1.3.1
	▫ history of landslides, slope erosion and the potential for ground and rock instability/landslides, and subsidence during and following project activities.	Section 6.2.2.4
	▪ Provide a characterization of the geochemical composition of all expected construction materials (i.e., eskers, quarries, etc.), in order to predict metal leaching and acid rock drainage including oxidation of primary sulphides and secondary soluble sulphate minerals.	Section 6.2.2.3
	For guidance please use: ▪ British Columbia Technical Circular T -04/13; Evaluating the Potential for Acid Rock Drainage and Metal Leaching at Quarries, Rock Cut Sites and from Stockpiled Rock or Talus Materials used by the MOTI; September 15, 2013[26]; and ▪ MEND Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials; MEND report 1.20.1, December 2009[27]. [26] https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2013/t04-13.pdf [27] http://mend-nedem.org/mend-report/prediction-manual-for-drainage-chemistry-from-sulphidic-geologic-materials/	-

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
8.4	**Topography, Soil and Sediment**	
	The Impact Statement must:	
	▪ Describe the landforms, soils and sediments within the local and regional project areas, including sediment stratigraphy; surficial geology maps and cross-sections of appropriate scale;	Section 6.2.2
	▪ Describe the soils and sediments within the local and regional project areas and their suitability for sourcing construction material;	Section 6.2
	▪ Describe the geomorphology, topography and geotechnical characteristics of areas proposed for construction of major project components, including the presence and distribution of eskers and permafrost, if applicable;	Section 6.2.2.3
	▪ Identify any areas of ground instability;	Section 6.2.2.6
	▪ Provide maps depicting soil depth by horizon and soil order within the project site area to support soil salvage and reclamation efforts, and to outline potential for soil erosion;	Section 6.2.2.7
	▪ Describe the suitability of topsoil and overburden for use in the reclamation of disturbed areas including an assessment of the acid generating potential of overburden to be used;	Section 6.2.2.7
	▪ Describe the historical land use and the potential for contamination of soils and sediments and describe any known or suspected soil contamination with the study area that could be re-suspended, released or otherwise disturbed as a result of the Project; and	Section 6.2.2.7
	▪ Identify ecosystems that are sensitive or vulnerable to acidification resulting from the deposition of atmospheric contaminants;	Section 6.2.2.3
	▪ Provide written description and maps of ecozones, ecoregions, and ecodistricts as per Ontario or Canada's Ecological Landscape Classification;	Section 11.2.2.1
	▪ Provide written description and maps of the current location of eskers and other post-glacial deposits on a map;	Section 6.2.2.6 Figure 6-10
	▪ Describe permafrost conditions including distribution of frozen and unfrozen ground; and	Section 6.2.2.4
	▪ Describe the potential for thaw settlement and terrain instability associated with ground thawing in permafrost areas.	Section 6.2.2.4
8.5	**Riparian and Wetland Environments**	
	The Impact Statement must:	
	▪ Provide pre-project characterization of the shoreline, banks, current and future flood risk areas, wetland catchment boundaries;	Section 11.2
	▪ Quantify, delineate and describe wetlands (fens, marshes, peat lands, bogs, etc.) within the local study area potentially directly, indirectly and/or cumulatively effected by the Project in the context of:	Section 11.2
	▫ wetland class, ecological community type and conservation status;	Section 11.2.1.3
	▫ biodiversity with respect to both flora and fauna;	Section 11.2.1.3.4
	▫ abundance at local, regional and provincial scales;	Section 11.2.1.3.4
	▫ distribution; and	Section 11.2.1.3.4
	▫ current level of disturbance.	Section 11.2.2
	▪ Provide written description and maps of primary, secondary and tertiary watersheds and major and minor rives and lakes;	Section 11.2.2.2
	▪ Provide written description and maps of ecozones, ecoregions, and ecodistricts as per Ontario or Canada's Ecological Landscape Classification;	Section 11.2.2.1
	▪ Provide data files of mapped features depicting natural areas and wildlife presence within, and use of, the study area;	Section 11.2
	▪ Identify and map all wetlands on federal lands, and all wetlands potentially directly or indirectly effected by the Project and within the scope of federal permits, authorizations, or other approvals;	Section 11.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Determine whether these wetlands are within a geographic area of Canada where wetland loss or degradation has reached critical levels, or considered ecologically or socially or economically important to a region;	Section 11.2
	▪ Identify and describe wetland capacities to perform hydrological and water quality functions, provide for wildlife and wildlife habitat or other ecological functions;	Section 11.2
	▪ Provide a wetland functions assessment in accordance with the guiding principles of *Wetland Ecological Functions Assessment: An Overview of Approaches*[28] or any subsequent approved guidelines by which to determine the most appropriate functions assessment methodology to use (see Appendix 1 of the TISG): [28] http://publications.gc.ca/site/eng/343283/publication.html	Section 11.2.2.6
	▫ complete this assessment prior to the start of Project construction for a representative selection of wetlands that the Project would directly impact and for a representative selection of wetland(s) that are hydrologically connected. In conducting this assessment, the Proponent should ensure that wetlands are considered in the context of:	Section 11.2.2.6
	i. the larger watersheds of which they are a part;	Section 11.2.2.1
	ii. adjacent land use with a focus on hydrological and other functions;	Section 11.2.2
	iii. landscape and/or watershed considering topography, soil types and hydrological linkages; and	Section 11.2.1.4
	iv. the global significance of peatlands across the regional study area.	Section 11.2.2.1
	▪ Collect data from representative wetlands in a manner that enables reliable extrapolations in space (i.e., at minimum to Project, local and regional study areas) and in time (i.e., across years):	Section 11.2
	▫ design surveys so that they represent the spatial and temporal targets of modeling and extrapolations, and to produce scientifically defensible predictions of impacts and estimates of mitigation effectiveness. Survey designs should be sensitive enough to detect and quantify the impacts at the spatial and temporal scales identified above (i.e., project study area, local study area, and regional study area), any departures from predictions, and the effectiveness of mitigations. Justify the selection of modeling techniques based on current and recent scientific literature;	Section 11.2.1
	▫ survey protocol planning for representative wetlands should include modeling and simulations to estimate sampling requirements, and analysis to evaluate resulting design options; and	Section 11.2.1
	▫ sample size must be planned to support evaluation of the project study area within the context of the local study area and regional study area. Appropriate design of surveys will need to consider multiple survey locations in order to represent the wetland heterogeneity of the regional study area, and to yield multiple survey locations per wetland type, without requiring aggregation of habitat classes post- hoc.	Section 11.2.2.2.1
	▪ This assessment should be quantitative and include the collection of site-specific baseline information on wetland functions, including:	Section 11.2
	▫ Surveys to assess for the presence, abundance, density, and distribution of migratory birds and federally listed species at risk, provincially listed species at risk, and species assessed by COSEWIC as at-risk in relation to potentially effected wetlands and associated riparian areas. Surveys should meet appropriate standards (see sections 8.9, 8.10, and 8.11), be species or bird group specific as appropriate, and be conducted during the appropriate times of the year as specified in section 8.9-8.11 of this document. Surveys for species at risk should assess species individually where possible (typically, an indicator approach is not appropriate for species at risk). Surveys should not be limited to species or groups of species that are wetland-obligate, but rather should include any species known to use wetland habitats as part of its lifecycle. Data should be sufficiently robust to identify which wetland classes are important to which species (and for how many).	
	▫ The spatial location and a description of the biological characteristics of each potentially effected wetland and the ecological services and functions (hydrology, biochemical cycling, habitat, and climate) they provide. The functions assessment should be as specific as possible to the biological characteristics of the wetland and to the ecological services and functions it provides.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ A supporting rationale and detailed description of the methods used in completing the wetland functions assessment, including sampling design.	
	▪ Submit complete data sets from any survey sites, including GIS files. Databases and GIS files should be accompanied by detailed metadata that meets ISO 19115 standard[29]. Contact provincial and/or local government authorities to determine if other wetland conservation policies, regulations or wetland compensation guidelines apply (refer to The Wetland Network[30]); and [29] https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16553 [30] www.wetlandnetwork.ca	Pending
	▪ identify a regional study area of sufficient size to capture effects to wetlands within the larger drainage area and include wetlands located outside of the local study area that may be effected by hydrological changes as a result of cumulative effects.	Section 11.1.5
8.6	**Groundwater and Surface Water**	
	The Impact Statement must:	
	▪ Provide complete hydrometeorological (temperature, precipitation, evapotranspiration) information based on data from nearby weather stations or from a weather station on site;	Appendix F (Sections 5 and 6)
	▪ Provide the delineation of drainage basins, at appropriate scales (water bodies and watercourses), including intermittent streams, flood risk areas and wetlands, boundaries of the watershed and sub-watersheds, in relation to key project components;	Appendix F (Section 5)
	▪ Provide written description and maps of primary, secondary and tertiary watersheds and major and minor rives and lakes;	Appendix F (Sections 5 and 6)
	▪ Provide the design flood at each water crossing;	Appendix F (Section 5.3.2)
	▪ Provide details on the hydraulic design of the water crossings;	Appendix F (Section 5.2.4)
	▪ Quantify the effects of the Project on the hydrological regime of both the local and regional study area; in particular, in case of any watercourse diversions, describe the effects on the flow upstream and downstream of the diversion;	Appendix F (Section 5)
	▪ Provide the timing of freeze/thaw cycles, ice cover, and ice conditions for surface water bodies in the Project area;	Appendix F (Section 5.3)
	▪ Provide for each water body potentially effected by the Project, the total surface area, bathymetry, bank and bottom features, biological components, flows, maximum and mean depths, and type of substrate (sediments);	Appendix F (Section 5.3.2)
	▪ Provide a delineation and characterization of groundwater–surface water interactions, including an identification of groundwater-dependent ecosystems, wetlands, discharge and recharge areas;	Appendix F (Section 6)
	▪ Describe permafrost conditions and taliks, if any, and their influence on groundwater– surface water interactions;	Appendix F (Section 6.3.11)
	▪ Develop a quantitative surface water balance for components of the Project that may result in significant changes to surface water flow patterns (e.g., large quarry/aggregate extraction/stockpiles);	Appendix F
	▪ Identify all springs and any other potable surface water resources within the local and regional project areas and describe their current use, potential for future use, and whether their consumption has Indigenous cultural importance;	Not Applicable
	▪ Describe the surface water quality baseline characterization program, including sampling site selection, monitoring duration and frequency, sampling protocol, and analytical protocol, including quality assurance and quality control measures;	Appendix F (Section 5)
	▪ Provide baseline surface water quality data, for a minimum of two years, for physicochemical parameters (temperature, pH, electrical conductivity, dissolved oxygen, turbidity, suspended solids) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and organic compounds, including those of potential concern); the data should illustrate the seasonal and inter-annual variability in baseline surface water quality, including possible changes due to groundwater–surface water interactions;	Appendix F (Section 5)
	▪ Provide baseline sediment quality and characteristic data for key surface water sites likely to be affected by the road (i.e., from runoff, spills, erosion and sedimentation, etc.);	Appendix F (Section 5)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Identify all domestic, communal, or municipal water wells within the local and regional project areas, including their screened hydro-stratigraphic unit and piezometric level; describe their current use, potential for future use, and whether their consumption has any Indigenous cultural importance;	Appendix F (Section 5)
	▪ Identify any groundwater monitoring wells in proximity to rock quarries and borrow areas, including their location, completion details (diameter, screen depth), geological log, screened hydro-stratigraphic unit, piezometric level, and monitoring frequency;	Appendix F (Section 6.3.9)
	▪ Provide groundwater elevation data from any monitoring wells showing seasonal water level variations when pertinent to the period of quarry and borrow area operation;	Appendix F (Section 6.3)
	▪ Describe the groundwater quality baseline characterization program including sampling site selection, monitoring duration and frequency, sampling protocol, and analytical protocol including quality assurance and quality control measures;	Appendix F (Section 6)
	▪ Provide baseline groundwater quality data for physicochemical parameters (temperature, pH, electrical conductivity, dissolved oxygen, turbidity) and relevant chemical constituents (major and minor ions, trace metals, radionuclides, nutrients, and organic compounds, including those of potential concern); the data should illustrate the seasonal and inter- annual variability in baseline groundwater quality, including possible changes due to groundwater–surface water interactions;	Appendix F (Section 6)
	▪ Describe and provide the hydraulic properties of the hydro-stratigraphic units;	Appendix F (Section 6.4)
	▪ Describe the structural geology of the hydrogeological environment, including major faults, fracture density and orientation with respect to groundwater flow directions;	Appendix F (Section 6.3)
	▪ Describe the groundwater flow boundaries of the hydrogeological environment for the purposes of the Impact Statement;	Appendix F (Section 6.3)
	▪ Provide hydrogeological maps and cross-sections of the study area showing water table elevations, potentiometric contours, interpreted groundwater flow directions, groundwater divides and areas of recharge and discharge; and	Appendix F (Section 6.3)
	▪ Present a conceptual model of the hydrogeological environment, including a discussion of geomorphic, hydro-stratigraphic, hydrologic, climatic, and anthropogenic controls on groundwater flow.	Appendix F (Section 6.4)
8.7	**Vegetation**	
	The Impact Statement must:	Section 11
	▪ Within the local study area of the Project, provide a description of:	
	▫ the biodiversity, relative abundance and distribution of vegetation species and communities of ecological, economic or human importance (e.g., traditional use, forestry, tame pasture, native prairie, wetland or old growth);	Section 11.2.
	▫ the conservation status (i.e., listed under the *Species at Risk Act* (SARA) or assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) to be 'at risk', including species of concern) applicable to any particular species or communities;	Section 11.2.
	▫ the species critical habitat as described in final or draft recovery strategies or action plans;	Section 11.2
	▫ the current level of both anthropogenic and natural (fire, flood, drought, etc.) disturbance associated with vegetation, including a description of:	Section 11.2
	▪ Level of habitat fragmentation;	Section 11.2
	▪ Historical and current fire disturbance;	Appendix F – Sections 9.3 and 9.5
	▪ Any proximate activities that have resulted in changes to fire regimes (e.g., fire suppression, flooding, insect infestations, etc.);	Sections 11.3.2.3.6, 11.3.6 and 11.4.1.3.6
	▪ Consult Ontario's Provincial Satellite Derived Disturbance Mapping digital resource[31]; and [31] https://geohub.lio.gov.on.ca/datasets/fire-disturbance-area	Appendix F – Section 9.2.1 and 9.2.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Consult Ontario's Far North Land Cover layer.	Section 11.2
	▪ Identify the biodiversity metrics, biotic and abiotic indicators that are used to characterize the baseline vegetation biodiversity and discuss the rationale for their selection;	Section 11.2
	▪ Summarize information available from the Far North Biodiversity Project[32]; [32] http://sobr.ca/the-far-north-biodiversity-project/	Appendix F – Sections 9.4 and 9.5
	▪ Provide data files of mapped features depicting vegetation presence within the study area;	Section 11.2
	▪ Describe any weed species, other invasive species, and introduced species of concern;	Section 11.2
	▪ Describe the use of local vegetation for medicinal or cultural purposes or as a source of country foods (traditional foods). The following species have known cultural importance to Indigenous communities: black spruce, white spruce, tamarack, balsam poplar, cedar, dwarf birch, red willow, trembling aspen, cottongrass, moss, black crowberry, blueberries, raspberries, reindeer moss, sphagnum moss, northern Labrador tea, caribou lichen, bearberry, dogwood, small cranberry, sage, sweetgrass, and lily pads;	Section 11.2
	▪ Describe any other plant species of concern for consumption or where use has any Indigenous cultural importance; and	Section 11.2
	▪ Describe any considered vegetation control alternative (including manual vegetation control methods).	Section 11.4.1
8.8	**Fish and Fish Habitat**	
	The Impact Statement must:	
	▪ Provide a characterization of fish (as defined in subsection 2(1) of the *Fisheries Act*) and other aquatic species on the basis of resident and migratory species, food webs and trophic levels, structural and functional linkages, life history and population dynamics, such as dispersion, fertility, recruitment, mortality rates, re-colonization, age structure, sex ratios, population regulation, stability, distribution (communities, stocks, subpopulations, metapopulations), movements, migratory patterns, routes and preferred corridor, seasonal and annual trends in abundance, sensitive habitats and periods in relation to the study area, behavioural habitat selection, mating strategies, social interactions, predator-prey interactions at multiple spatial and temporal scales, which are critical to identifying effects to population persistence and ecological processes;	Section 10.1.4 Appendix F (Section 8)
	▪ Provide a description of the biodiversity within the freshwater environment, including: trophic state, periphyton, phytoplankton, zooplankton, fish and the interactions and relative significance of each species with the identified food chains;	Section 10.3.1 Appendix F (Section 8)
	▪ Identify the biodiversity metrics, biotic and abiotic indicators that are used to characterize the baseline biodiversity for fish and marine animals, including the rationale for their selection;	Section 10.1.4 Appendix F (Section 8)
	▪ Provide information on the surveys carried out and the source of data available (e.g., location of sampling stations, catch methods, date of catches, species, catch-per-unit effort);	Section 10.2.1 Appendix F (Section 8)
	▪ Describe primary and secondary productivity in effected water bodies with a characterization of biotic interaction processes (e.g., food web and trophic levels, nutrient cycling), season variability, ranges and sensitive periods;	Section 10.3.1.2 Appendix F (Section 8)
	▪ Provide written description and maps of primary, secondary and tertiary watersheds and major and minor rives and lakes;	Section 10.1 Section 10.2
	▪ List any aquatic species at risk, including critical habitat, that are known to be present within the study area;	Section 10.2.1.3 Appendix F (Section 8)
	▪ Provide a description and location of critical habitats for aquatic species at risk that are known to be present within the study area;	Section 10.2.1.3 Appendix F (Section 8)
	▪ Describe habitat by mesohabitat (e.g., pool, riffle, run), including the length of the section, width of the channel from the high water mark (bankfull width), water depths, type of substrate (sediments), aquatic and riparian vegetation. Provide maps and photos;	Section 10.2.2 Appendix F (Section 8)
	▪ Identify natural obstacles (e.g., falls, beaver dams) or existing structures (e.g., water crossings) that hinder the free passage of fish;	Section 10.3.1.3 Appendix F (Section 8)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Provide a characterization of fish habitat features that may demonstrate the presence of fish species in terms of appropriate habitats—water quality and quantity characteristics, sediment type characteristics, benthic features, prey, shelter, refuge, feeding, spawning habitats, nursery habitats, rearing habitats, overwintering, migration routes and the sensitive times for these activities;	Section 10.2.2 Appendix F (Section 8)
	▪ Provide a description of habitat information that includes water depths (bathymetry) and the littoral, sublittoral, limnetic, profundal, and benthic zones. Stratification information will include epilimnion, metalimnion, and hypolimnion depths in combination with a water chemistry profile (dissolved oxygen, pH, conductivity, etc.);	Section 10.2.2 Appendix F (Section 8)
	▪ Describe the use of fish and/or aquatic species (including Walleye (*Sander vitreus),* Northern Pike (*Esox lucius)*, Lake Whitefish (*Coregonus clupeaformis)*, Brook Trout (*Salvelinus fontinalis*), Chain Pickerel (*Esox niger),* Yellow Perch (*Perca flavescens*), Cisco (*Coregonus artedi*), Burbot (*Lota lota*), Longnose Sucker (*Catostomus catostomus*), White Sucker (*Catostomus commersoni*), Lake Sturgeon *(Acipenser fulvescens*) and Lake chub (*Couesiius plumbeu*) for consumption or where use has Indigenous cultural importance;	Section 10.3.2.2 Appendix F (Section 8)
	▪ Describe any existing effects associated with previous or current activities (e.g., angling pressures, commercial fisheries); and	Section 10.3.2.2
	▪ Identify sensitive habitat areas (e.g., Ecologically and Biologically Sensitive Areas) within the study area.	Section 10.4.1 Appendix F (Section 8)
	Certain intermittent and ephemeral watercourses or waterbodies may constitute fish habitat or contribute indirectly to fish habitat during a certain period. The absence of fish or water at the time of the survey does not irrefutably indicate an absence of fish and/or fish habitat (e.g., migratory corridor).	Section 10.1.4, Section 10.4.1
8.9	**Birds, Migratory Birds and their Habitat**	
	The Impact Statement must:	
	▪ describe biodiversity of bird species and their habitats that are found or are likely to be found in the study area, including identification of Bird Conservation Regions and Bird Conservation Region strategies. Possible information sources include, but are not limited to: wildlife experts/naturalists, Canadian Conservation Data Centres, Bird Conservation Region strategies, E-Bird, Breeding Bird Atlases, Environment and Climate Change Canada's guidance on Bird Surveys (see Appendix 1);	Section 13.2.1.2.1
	▪ The following groups of migratory and non-migratory birds should be considered as valued components:	
	▫ forest birds;	Section 13.1.5 Section 13.3.6 Sectio 13.5.2
	▫ raptors;	Section 13.1.5
	▫ shorebirds;	Section 13.1.5
	▫ waterfowl; and	Section 13.5.2
	▫ bog/fen birds, and other wetland birds.	Section 13.1.5
	▪ Key habitat associated with species at risk should be considered valued components, including eskers and similar geologic features, wetlands and peatlands;	Section 13.1.2.2.2
	▪ Collect bird data to adequately represent the following temporal sources of variation:	
	▫ among years;	Section 13.2.1.2.2
	▫ within and among seasons (e.g., spring migration, breeding, fall migration, overwintering); and	Section 13.2.1.2.2
	▫ within the 24 hour daily cycle.	Section 13.2.1.2.2
	▪ Collect explanatory (i.e., covariate) data necessary for modeling in such a way as to adequately represent the following spatial and temporal sources of variation:	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ spatial variation in:	
	– land cover composition	Section 13.2.1
	– soil type, geomorphology	Not applicable
	– hydrological processes, and	Sections 13.3.7.1 - 13.3.8.1 - 13.3.9.1 - 13.3.10.1 - 13.3.11.1 - 13.3.11.5
	– climatic conditions; and,	
	– temporal, especially annual, variation in local weather inter- and intra-annual climatic variability.	Section 13.2.1.2.1
	▪ Collect data in a manner that enables reliable extrapolations in space (i.e., at minimum to Project, local and regional study areas) and in time (i.e., across years):	
	▫ design surveys so that they represent the spatial and temporal targets of modeling and extrapolations, and to produce scientifically defensible predictions of impacts and estimates of mitigation effectiveness. Survey designs should be sensitive enough to detect and quantify the impacts at the spatial and temporal scales identified above (i.e., project study area, local study area, and regional study area), any departures from predictions, and the effectiveness of mitigations. Justify the selection of modeling techniques based on current and recent scientific literature;	Section 9.2.2.1
	▫ survey protocol planning should include modeling and simulations to estimate sampling requirements, and analysis to evaluate resulting design options:	
	– collect field data over at least two years. The goal of collecting data over multiple years is to improve the understanding of natural variability in populations. Two years of sampling is suggested as a minimum. As the number of sampling years increases so does the understanding of natural variability;	13.2.1.2
	– sample size must be planned to support evaluation of the project study area within the context of the local study area and regional study area. Appropriate design of surveys will need to consider multiple survey locations in order to represent the habitat heterogeneity of the regional study area, and to yield multiple survey locations per land cover or habitat class, without requiring aggregation of habitat classes post-hoc;	13.2.1.2.2
	– sampling effort per unit area - field survey effort should be most intensive within the project study area. The level of effort per unit area may be similar or somewhat less within the remainder of the local study area, but should be scaled to the likelihood that project effects will impact birds within that zone. Efforts outside the project study area should be carefully designed to ensure that estimates comparing within and across the project study area, local study area and regional study area are unbiased and as precise as possible;	Appendix F
	– rare species require more survey effort to detect than common species, and species rarity should be accounted for in survey design by increasing the number and duration of surveys; and	Section 12.2.2.3.1
	– simulation modelling should be used to assess bias and precision between project study area, local study area, and regional study area to ensure the estimates are useful for comparison. Field surveys should occur within the regional study area since there are few existing sources of data that effectively describe regional bird populations in areas, including this area, that are distant from road networks.	Section 12.2.1.3.2 Appendix F - Section 10.2.5.4.4
	▫ at minimum, the combined information from existing data and field surveys needs to be detailed enough to describe the distribution and abundance of all bird species in relation to the study areas;	Appendix F - Sections 12.2.2.2.4 - 10.3.2.3 and 10.2.5.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ submit complete data sets from all survey sites. These should be in the form of complete and quality assured relational databases, with precisely georeferenced site information, precise observation/visit information and with observations and measurements in un-summarized form. Databases and GIS files should be accompanied by detailed metadata that meets ISO 19115 standards[33]; [33] https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16553	Appendix F
	▫ provide documentation and digital files for all results of analyses that allow for a clear understanding of the methods and a replication of the results (raw scripts or workflows are preferred in place of descriptive documentation);	Appendix F
	▫ provide raw survey data and analysis results for 1) all birds, 2) each valued component, and 3) Bird Conservation Region Priority Species showing the species ranked according to:	Appendix F - Sections 10.3.2.3 and 10.3.2.5
	– frequency of occurrence[34], [34] Frequency of occurrence: % frequency for Species A = (# sampling locations in which Species A detected / total # sampling locations) * 100	Appendix F - Section 10.3.2.3
	– abundance,	Appendix F - Section 10.3.2.3
	– abundance in each habitat type, and	Appendix F - Section 10.3.2.3
	– map showing areas of highest concentrations of species.	Appendix F - Section 10.3.2.3
	▪ Design suggestions for Project Study Area and Local Study Area scales: Use a standardized design approach during survey planning. The resulting design details will serve as the basis to develop alternative designs, evaluate options for particular design details, and to identify potential efficiencies. The approaches and tools suggested elsewhere in this document (e.g., land cover analysis, data simulations) should be considered during the planning phase. The following should be considered as inputs to design planning and evaluation;	
	▫ transects and sites:	
	– transects should be spaced every 2 kilometres along the route, oriented perpendicular to the route, and with the mid-point of each transect located on the centreline of the route. A maximum length of 5 kilometres is likely suitable for sampling most habitat types, including those associated with eskers and similar linear features in alignment with the route. Transect lengths less than 5 kilometres may be suitable but should be justified with respect to an analysis of land cover that demonstrates no further change in land cover composition with increasing distance from the intersection of route and transect mid- point;	Appendix F
	– survey sites along transect should be located as follows: 1 site on centreline of route, sites spaced every 250 metres up to 1 kilometre, then spaced every 500 metres to end of transect. A 5-kilometre transect should have 15 survey sites;	Appendix F - Section 11.1
	– every 100 kilometres of route should contain 50 transects. Of these, 20 transects should be sampled using Automated Acoustic Recorders (ARU) and 30 transects sampled by human observers (Point Count Transects); and	Appendix F - Section 10.2.5.4.2
	– project components other than the route itself should be sampled. Such components that are linear (e.g., access or service roads) should be surveyed using transects as above. Non-linear components (e.g., aggregate pits) should be surveyed using a grid of sites spaced 250 metres apart and be sufficient to cover the Project component, plus a maximum 3-kilometre buffer. As with transect lengths, modification of buffer width to a minimum of 500 metres may be justifiable if land cover analysis demonstrates no further change in land cover classification with increasing buffer width;	Appendix F - Section 11.1
	▫ bird sampling:	
	– ARU Transects: Deployment of ARUs should be used to inform estimates of site use by birds across a broad range of dates (including seasons) and times of day. Since ARUs capture bird movements across dates and times, sampling on ARU Transects should be conducted on a subset of sites within transects. This subset should include the route centreline site, with the remaining sites at 500-metre spacing out to the transect endpoint:	Appendix F - Section 10.2.5.4.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	1. Within each sampling year, ARUs should be deployed at sites as long as possible, with a minimum period of May 1 through July 10 (Breeding Recordings). Use deployments that maximize full use of battery and sound card capacity;	Appendix F - Section 10.2.5.4.2
	2. A subset of at least 50% of the ARU sites should have ARUs deployed to align with periods during which sites are used by birds in fall migration (August 1 through September 30) and during the winter (December 1 though March 31) (i.e., collectively, Fall/Winter Recordings). These fall and winter sites may be a subset of either entire ARU transects or sites along transects but land cover analysis should be used to ensure the subset is an unbiased sample of the population of ARU sites;	Appendix F - Section 10.2.5.4.3
	3. ARU deployments for Breeding Recordings should be programmed to record daily or every 2nd day, with a morning and an evening schedule. Recording should occur in two phases to avoid single recordings spanning two dates. Phase 1 would start at 00:00 (HH:MM), with a schedule of 3-minutes On and 12-minutes Off until 5 hours beyond local sunrise (i.e., SR+5hr). Phase 2 would start 30 minutes before local sunset, with a schedule of 3-minutes On and 12-minutes Off until 23:56 (HH:MM);	Appendix F - Section 10.2.5.4.2
	4. ARUs should be set to record using a sampling rate of 44.1kHz	
	– Point Count Transects: Each site should be sampled by human observers using a standardized 10-minute point count. To enable observer: recorder comparisons, observers should also record the survey visit using a high quality portable recording device (i.e., with 360- degree recording in WAV format, selectable sampling rate, and adjustable microphone gain), mounted on a tripod. Observers should be skilled in bird identification by sight and sound, and should use 1- minute intervals within the 10-minute point count duration such that each individual bird is entered in the first minute interval in which it was detected. Estimated distances from observers to each bird should be recorded as: 0-50m, 50m-100m, and beyond 100m.	Appendix F - Section 10.2.5.4.1
	▫ Geomatics and habitat typing:	
	– each site visited at any time between the dates of June 10 and August 30 should be photographically documented with 13 photos. At each cardinal direction (N, E, S, W): 1 photo at shoulder height with arm and camera extended parallel to ground, 1 photo with arm at 45-degrees (from body position) pointing down, and 1 photo with arm extended at 135-degrees (from body position) pointing up. And finally, one photo with arm extended straight up (i.e., vertically). Photos should be interpreted by qualified individuals as precisely as possible according to one or each of the classification schemes: Ontario Ministry of Natural Resources and Forestry's Boreal Ecosites, Wetland Ecosystem Classification for Northern Ontario (W-type), Forest Ecosystem Classification for Northern Ontario (V-type), and NRCan's Canadian National Vegetation Classification (vegetation association);	Appendix F
	– use the Ontario Ministry of Natural Resources and Forestry's Far North Land cover (version 1.4 or later, as available) and augmentation with fire history, digital elevation models, surficial geology and other data sources; and	Appendix F - Section 9.2.3.3
	– all candidate survey sites should be attributed to a 100m buffer around site centroid, areal coverage and percentage of each land cover class be assigned to sites, and these values used as inputs to evaluations of representivity and options for design modifications.	Appendix F - Section 9.2.3.3
	▫ Acoustic file and data analysis:	
	– acoustic files should be analysed by interpreters skilled in identifying birds by sound and familiar with bird communities of the region sampled. Interpretation of acoustic files should be done using the Wildtrax interface (https://www.wildtrax.ca/home), with each individual detected recorded as a data point and referenced to the first 1-minute interval it was detected:	Appendix F - Section 10.2.5.4.2
	1. Prior to interpretation, acoustic files suitable for analysis should be identified by examining spectrograms and listening to a short segment of the file. Files with substantial wind, rain or other noise (e.g., frogs) should be excluded.	Appendix F - Section 10.2.5.4.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	2. From the set of suitable files in the Breeding Recordings, select one (1) 3-minute segments per week from the Night period (midnight to 1 hour before sunrise), two (2) 3-minute segments per week for the Morning period (1 hour before to 5 hours after local sunrise), and one (1) 3-minute segment per week from the Dusk period (30 minutes before to 2 hours after local sunset).	Appendix F - Section 10.2.5.4.2
	3. From the set of suitable files in the Fall/Winter recordings, select three (3) 3-minute segments per week from the Morning period (1 hour before to 5 hours after local sunrise).	Appendix F - Section 10.2.5.4.2
	– Data analysis methods should be clearly described and transparent (e.g., annotated scripts), extract the maximum information from the data, and be appropriate for the data and protocols:	
	1. Generalized linear mixed models or suitable alternatives (e.g., boosted regression trees, generalized additive models, or models developed under a Bayesian framework) may be suitable approaches for analysing data obtained from the described design and for addressing a goal of predicting patterns beyond the sites and times sampled;	Section 12.2.2.3 Appendix F - Section 9.4.8.1.2
	2. Analysis of ARU and point count data should account for differences in the survey methods (e.g., ability to detect, visit/sample timing and frequency). Offsets may be used to help account for variation in detection ability. Consider expert guidance on the proper use of offsets in modeling. Detection rates are unlikely to remain constant between visits so, if occupancy modeling is used it should be well justified.	Appendix F - Section 10.2
	▪ Provide detailed descriptions of bird habitat that includes at a minimum, characterization of biophysical conditions with regard to ecoregion, Bird Conservation Region, and with respect to the particular conditions of boundary regions. The Project crosses and is in close proximity to ecoregion and Bird Conservation Region boundaries. Since the project study area is at the edges of the ecoregions and Bird Conservation Regions, habitat patterns are likely to reflect these border characteristics, with one of the outcomes being that habitat types common elsewhere in the ecoregion may be relatively uncommon and potentially more ecologically important in the border region. Surveys need to be detailed enough within the local study area and regional study area to put the project study area into context of these wider areas:	Section 12.2.1.3 Appendix F - Section 10.3.2.1.1
	▫ mixed wood forest landcover and other upland vegetation types may be particularly important for many associated birds, supporting birds during migration, breeding and through the winter. Eskers and related features are uncommon and potentially ecologically important elements of the landscape, and are likely to be disproportionately effected by these projects. River riparian corridors are another relatively uncommon feature with adjacent mixed wood forest; and	Appendix F - Section 10.3.2.5.1
	▫ should there be some displacement of nesting birds, baseline data should provide evidence that there is enough equivalent habitat for birds to be displaced to and that the vegetation being removed (e.g., eskers) is not unique to the project study area.	Section 12.2.2.3.6 Appendix F - Sections 10.3.2.6.4, 10.3.2.6.5 and 10.3.2.6.6
	▪ Identify the biodiversity metrics, biotic and abiotic indicators that are used to characterize the baseline avifauna biodiversity and discuss the rationale for their selection:	Appendix F - Section 9.5
	▫ species communities should not be collapsed into diversity metrics or the focus narrowed to indicator species. Species identity, distribution, abundance and where possible estimates of breeding status should be the primary targets of quantification.	Appendix F - Section 9.5
	▫ biodiversity metrics for each valued component should include:	
	– distribution in space;	Appendix F - Section 10.3.2.3
	– frequency of occurrence;	Appendix F - Section 10.3.2.2
	– patterns of occurrence and abundance in time;	Appendix F - Section 10.3.2.2
	– abundance and, if possible, density; and	Appendix F- Section 10.3.2.3
	– associated habitat type(s) and strength of associations.	Appendix F - Section 10.2.5.4.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Provide estimates of the abundance and distribution, and information on the life history of migratory and non-migratory birds (including, but not limited to, waterfowl, raptors, shorebirds, marine birds, marsh birds and other land birds) in the study area. Estimates may be based on existing information, or additional surveys, as appropriate, to provide current data sufficient for reliable estimates. In doing so:	Appendix F - Section 10.3.2.3
	▫ generate measures of abundance and distribution using spatially balanced, randomly selected sample locations. Sampling should include edges and transitions between habitat types and should not be focused exclusively within homogeneous patches of a given habitat type:	Appendix F - Section 10.2.5
	– use simulation modelling prior to sampling to ensure coverage is broad enough to estimate and account for detection error as well as provide unbiased estimates of abundance and distributions; and	Section 12.2.2 Appendix F: Section 10.2.5
	– sampling within temporal boundaries should be spatially and temporally balanced so that all spatial areas receive comparable temporal coverage.	Section 12.1.5.2
	▫ Provide estimates of confidence or error for all estimates of abundance and distribution. Estimates should be defined (e.g., mean across years, mean across sites, modeled prediction) and, if appropriate, confidence or other intervals should be defined (e.g., 95% confidence intervals, credible intervals). Use of hypothesis testing p - values is generally not appropriate in this context and their use should be justified;	Sections 12.10.5
	▫ whenever estimating densities for species, consider observer-induced detection error for comparisons among counts (e.g., between, before and after surveys, or between effected and un-effected sites) to be valid. When accounting for detection error the method used should account for variable detection between landcover types, observers, weather, time of year, species, as well as random variation between visits. Simulation methods can help determine if a specific method is appropriate for a given survey design and analysis. Care should be taken to avoid affecting the reliability of abundance estimates[35]; [35] https://onlinelibrary.wiley.com/doi/full/10.1111/biom.12734	Appendix F -Sections 10.3.2.3
	▫ a spatially dispersed stratified random sampling approach should be used to maximize efficiency. Sample sites should be selected with a randomization procedure that accounts for the project design footprint. To select specific sampling sites, care should be taken to ensure sites are spatially distributed across the area of interest and coverage is obtained across habitat types. Site locations should be randomly selected using an approach that avoids implicit bias in site selection;	Appendix F : Section 10.2.3 Sections 10.2.5.4.1 – 10.2.5.4.4
	▫ provide a justification on the approach chosen. If necessary to constrain or adjust site selection based on access limitations, simulation modelling should provide evidence that this sampling strategy has not resulted in the introduction of bias. Survey vegetation features of concern in a manner that is not disproportionate to other types. Avoid bias in estimates of abundance and impair extrapolation and statistical inference; and	Appendix F -Section 10.2.3
	▫ include all criteria used to choose plot locations in the Impact Statement.	Appendix F -Section 10.2.3
	▪ Identify areas of concentration of migratory birds, including sites used for migration, staging, breeding, feeding and resting. The following must be considered when identifying areas of concentration of migratory birds:	Appendix F -Section 10.2.5.4
	▫ migratory bird concentrations can vary within year and between years. It is therefore important to survey across the project study area, local study area, and regional study area both temporally and spatially;	Appendix F -Section 10.2.5.4
	▫ migratory bird counts can vary strongly between years and so survey length must be able to estimate the variation accurately; and	Appendix F -Section 10.2.5.4
	▫ migratory bird counts are dependent on length of stay as well as presence. Attempt to estimate abundances across a migratory period should incorporate an estimate of inter and intra-annual trends and estimates of lengths of stay. Irruptive species may act in ways similar to migrants in terms of abundance. They may be absent from an area until conditions change (such as a mast event), during which time the habitat becomes vital to these species.	Appendix F -Section 10.2.5.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Provide written description and maps of ecozones, ecoregions, and ecodistricts as per Ontario or Canada's Ecological Landscape Classification;	Section 9.3.1.1.1 -Appendix F
	▪ provide a characterization of habitat features found in the project area that are associated with the presence of those bird species that are likely to be effected, based on the best available existing information (e.g., land cover types, vegetation, aquatic elements), including habitat fragmentation. Classification should include local aerial and on-site photos;	Section 12.1.4
	▪ provide an estimate of year-round bird use of the area (e.g., winter, spring migration, breeding season, fall migration), based on data from existing sources and surveys to provide current field data if required to generate reliable estimates. In each portion of the year, survey effort must account for differences in species movements including: winter usage of highly habitat reliant species and highly mobile species that will accurately characterize the use of a site;	Appendix F -Section 10.3.2.1.1
	▪ describe the use of (magnitude, timing) migratory and non-migratory birds as a source of country foods (traditional foods) or where use has Indigenous cultural importance (e.g., Canada Goose, Snow goose, Swans, Gyrfalcon, Loon, Peregrine Falcon, and duck species); and	Appendix F -Section 10.4
	▪ identify any and all federal Species at Risk and/or Critical Habitat in the study area; sites that are likely to be sensitive locations and habitat for birds or environmentally significant areas. These include National Parks, Areas of Natural or Scientific Interest, Migratory Bird Sanctuaries or other priority areas or sanctuaries for birds, National Wildlife Areas or World Biosphere Reserves, offshore Marine Protected Areas and Ecologically and Biologically Significant Marine Areas.	Appendix F -Section 10.2.5.4
	The description of bird species and their habitat in the study area may be based on existing sources, but supporting evidence is required that demonstrates that the data used are representative of the avifauna and habitats in the study area. Existing data must be supplemented by surveys, if required to produce a representative sample of the avifauna and habitats of the study area.	Appendix F -Section 10.2.5.4
	Avian surveys should be designed based on a thorough review of the available scientific literature pertinent to the specific region, bird groups and anticipated effects. The Canadian Wildlife Service's *Framework for the Scientific Assessment of Potential Project Impacts on Birds* provides examples of project types and recommended techniques for assessing effects on migratory birds (see Appendix 1 of the TISG).	Appendix F - Section 10.2.5.4
8.10	**Terrestrial Wildlife and their Habitat**	
	The Impact Statement must:	
	▪ Identify wildlife species, other than avian species, of ecological, economic or human importance (particularly to Indigenous peoples), within the study area (including moose, rabbit, beavers, otters, muskrat, and frogs), that are likely to be directly or indirectly effected and describe each species:	Section 12.1.4.1 - 12.2
	▫ biodiversity[36], distribution and location; [36] http://www.biodiv.be/biodiversity/about_biodiv/biodiv-what	Appendix F - Section 9.5
	▫ abundance[37] and population status; [37] https://www.britannica.com/science/biogeographic-region/Components-of-species-diversity-species-richness-and-relative-abundance#ref588341	Appendix F - Sections 10.1 - 10.2
	▫ life cycle;	Section 12.2
	▫ seasonal ranges, migration and movements;	Appendix F - Sections 11.2.3
	▫ habitat requirements; and	Appendix F - Sections 10.2.2
	▫ sensitive periods (e.g., seasonal, diurnal and nocturnal).	Sections 12.4.3 to 12.4.7

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ For the species identified above, describe and quantify the habitat type, including its: function; location; suitability; structure; diversity; relative use, natural inter-annual and seasonal variability, and; abundance as it existed before project construction;	Sections 12.4.3 to 12.4.7
	▪ Provide written description and maps of ecozones, ecoregions, and ecodistricts as per Ontario or Canada's Ecological Landscape Classification;	Appendix F - Section 9.3.1.1.1
	▪ Identify the biodiversity metrics, biotic and abiotic indicators that are used to characterize the baseline biodiversity for terrestrial wildlife and discuss the rationale for their selection;	Appendix F - Section 9.5.1
	▪ Describe the historic and current use of terrestrial wildlife as a source of country foods (traditional foods) or where use has Indigenous cultural importance (e.g., black bear, caribou, deer, moose, beaver, arctic fox, fisher, wolverine, rabbits, marten, muskrat, and otter);	Appendix F- Section 10.4
	▪ Describe the use and harvesting of fur-bearing species and whether its harvesting has Indigenous cultural importance;	Appendix F- Section 10.2
	▪ Describe any locations within the study area that might constitute sensitive areas for terrestrial wildlife such as: species at risk critical habitat that has been designated or is under consideration, ecological reserves and protected areas, in proximity to the project location or that could be effected by routine project operations or any lands in the study area that might constitute sensitive areas and habitat for wildlife, or nearby environmentally significant areas such as; National Parks, areas of natural or scientific interest, National Wildlife Areas, World Biosphere Reserves or UNESCO Natural World Heritage Sites;	Appendix F- Section 9.3.1.2
	▪ Identify wildlife management areas and established or proposed sanctuaries; and	Appendix F- Section 9.3.1.5
	▪ Describe the levels of disturbance currently affecting wildlife and wildlife habitat, such as habitat fragmentation and the extent of human access and use.	Appendix F- Section 9.5.3
	The Ministry of Environment, Conservation and Parks may be able to provide information on specific data sources and survey methodologies. Collect wildlife data to represent the following temporal sources of variation:	
	▪ Among years;	Appendix F- Section 11.2.1
	▪ Within and among seasons (e.g., spring dispersal, breeding, late summer/fall migration and swarming, hibernation); and	Appendix F- Sections 10.2.5.2.2-10.3.1.6.3
	▪ Within the 24 hour daily cycle. Rare species require more survey effort to detect than common species, and this needs to be accounted for in survey design by increasing the number and duration of surveys.	Appendix F- Sections 11.2.3.3 - 11.2.3.4
	Submit complete data sets from all survey sites. These should be in the form of complete and quality assured relational databases, with precisely georeferenced site information, precise observation/visit information and with observations and measurements in un-summarized form. Databases and GIS files should be accompanied by detailed metadata that meets ISO 19115 standards.[38] [38] https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16553	Appendix F
	Provide documentation and digital files for all results of analyses that allow for a clear understanding of the methods and a replication of the results (raw scripts or workflows are preferred in place of descriptive documentation).	Appendix F
8.11	**Species at Risk**	
	The Impact Statement must:	
	▪ Provide a list of all provincially listed protected species at risk and species assessed by the COSEWIC that have the status of extirpated, endangered, threatened or of special concern and that may be directly or indirectly effected by the Project. Use existing data and literature as well as surveys to provide current field data that reflects the natural inter- annual and seasonal variability;	Section 13.1.2
	▪ Provide a list of all species at risk listed under Schedule 1 of the federal *Species at Risk Act* that may be directly or indirectly effected by the Project. Use existing data and literature as well as surveys to provide current field data that reflects the natural inter-annual and seasonal variability of each species. Species at risk which may inhabit the project area include:	
	▫ Lake sturgeon (Acipenser fulvescens);	Section 13.1.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ Northern Myotis (Myotis septentrionali);	Section 13.1.5
	▫ Little Brown Myotis *(Myotis lucifugus);*	Section 13.1.5
	▫ Caribou (Rangifer tarandus; Provincial: Missisa, and Ozhiski ranges; Federal: Far North range);	Section 13.1.5
	▫ Rusty Blackbird (Euphagus carolinus);	Section 13.1.5
	▫ Bank Swallow (Riparia riparia);	Section 13.1.2.1
	▫ Barn Swallow (*Hirundo rustica*);	Section 13.1.2.1
	▫ Canada Warbler (Cardellina canadensi);	Section 13.1.2.1
	▫ Chimney Swift (*Chaetura pelagica*);	Section 13.1.2.1
	▫ Common Nighthawk (*Chordeiles mino*);	Section 13.1.2.2.8
	▫ Eastern Whip-poor-will (*Antrostomus vociferu*);	Section 13.1.2.1
	▫ Evening Grosbeak (Coccothraustes vespertinus);	Section 13.1.2.2.4
	▫ Olive-sided fly-catcher (*Contopus cooperi*);	Section 13.5.2.6.
	▫ Peregrine Falcon (*Falco peregrinus*);	Section 13.3.7.4 Section 13.3.8.4 Section 13.3.9.4
	▫ Short-eared Owl (*Asio flammeus*);	Section 13.5.2.11
	▫ Yellow Rail (Coturnicops noveboracensis); and	Section 13.1.2.1 Section 13,2.2
	▫ Wolverine (*Gulo gulo*);	Section 13.1.6 Section 13.2.1.1.4 Section 13.2.2 Section 13.2.2.1.4
	▪ Key habitat associated with species at risk should be considered valued components, including eskers and similar geologic features, wetlands and peatlands;	Section 13.1.2
	▪ Provide written description and maps of ecozones, ecoregions, and ecodistricts as per Ontario or Canada's Ecological Landscape Classification;	Section 13.1.6.1 Section 11.2.1.2 Section 11.2.1.3 Section 11.4.5
	▪ Collect species at risk data to represent the following temporal sources of variation:	
	▫ among years;	Section 13.2.1- 13.2.2
	▫ within and among seasons (e.g., spring dispersal, breeding, late summer/fall migration and swarming, hibernation); and	Section 13.2.1- 13.2.2
	▫ within the 24 hour daily cycle.	Section 13.2.1- 13.2.2
	▪ Account for the fact that rare species will require more survey effort to detect, which should be reflected in survey design by increasing the number and duration of surveys:	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ collect field data over at least two years. The goal of collecting data over multiple years is to improve the understanding of natural variability in populations. Two years of sampling is being suggested as a minimum. As the number of sampling years increases so does the understanding of natural variability;	Section 13.2.1 Appendix F – Section 3.2
	▫ sample size must be planned to support a robust evaluation of the project study area within the context of the local study area and regional study area;	Section 13.2.1 Appendix F – Section 11.2
	▫ design of surveys will need to consider multiple number of survey locations in order to represent the habitat heterogeneity of the regional study area, and to plan the number of survey locations per land cover or habitat class so that aggregation of habitat classes post-hoc is not required;	Section 13.2.1 Appendix F – Table 11.2
	▫ in terms of sampling effort per unit area, field survey effort should be most intensive within the project study area. The level of effort per unit area may be similar or somewhat less within the remainder of the local study area, but should be scaled to the likelihood that project effects will impact species at risk within that zone. Efforts outside the project study area should be carefully designed to ensure that estimates comparing and across the project study area, local study area and regional study area are unbiased and precise;	Section 11.2.1.1
	▫ a habitat-stratified random sampling approach should be used. Sample sites should be selected with a randomization procedure such as a GIS grid overlay; and	Section 13.2.1
	▫ where Critical Habitat has not been defined or has been partially identified, a Schedule of Studies may have been created to identify gaps in information for these species. The Schedule of Studies information should be referred to when implementing or assessing survey protocols, in order to provide necessary information for these species.	Section 13.4.2
	▪ Ensure that, at minimum, the combined information from existing data and field surveys must be able to describe the distribution and abundance of species at risk in relation to the study areas;	Section 13.2.2
	▪ Contain complete data sets from all survey sites. These should be in the form of complete and quality assured relational databases, with precisely georeferenced site information, precise observation/visit information and with observations and measurements in un-summarized form. Databases and GIS files should be accompanied by detailed metadata that meets ISO 19115 standards[39]; [39] https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16553	Appendix F
	▪ Provide documentation and digital files for results of analyses that allow for a clear understanding of the methods and a replication of the results (raw scripts or workflows are preferred in place of descriptive documentation);	Appendix F
	▪ Follow the survey requirements specific to bats:	
	▫ to augment existing information sources and collect data able to robustly establish baseline conditions and assess impacts, undertake site-specific surveys to:	Section 13.2.2.1.5
	– compile a species inventory (species present/not detected);	Section 13.2.2.1.5
	– quantify baseline bat activity to evaluate relative use of different habitats or features in the project area and to help support and evaluate project siting decisions and impact predictions;	Section 13.2.2.1.5
	– document baseline conditions within the project Area and Local Assessment Area to support study of impacts;	Section 13.2.2.1.5
	– locate and confirm use of high value habitat features such as roosts (including cavity trees and buildings with potential for roosting) and hibernacula. This could be done using desktop habitat suitability modelling with field surveys to confirm presence in high potential areas;	Section 13.2.2.1.5
	– identify potential regional migration corridors; and	Section 13.2.2.1.5
	– identify site-specific travel corridors and movement patterns.	Section 13.2.2.1.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ the following types of surveys are required:	
	– acoustic surveys, ensure study design is statistically valid, conducted in spring, summer, and fall to capture dispersal and migration (travel corridors), breeding, and roosting;	Section 13.2.2.1.5
	– locate and assess potential hibernacula and roosts for use by bats, accounting for inter-annual and within-season variability in use. This could be done using desktop habitat suitability modelling with field surveys to confirm presence in high potential areas; and	Section 13.2.2.1.5
	– refer to provincial recommendations for guidelines on survey methodology[40]. [40] https://www.ontario.ca/page/bats-and-bat-habitats-guidelines-wind-power-projects#section-4 Appendix A; while these guidelines were developed for wind energy projects, the methods for evaluating bat significant wildlife habitat apply to a range of project types.	Section 13.2.1.1.4
	▫ data or reports must include information on acoustic detection methods used, including the following:	
	– detector make and model;	Appendix F - Section 10.2.5
	– microphone model used;	Appendix F - Section 10.2.5
	– location of Detectors;	Appendix F - Section 10.2.5
	– height of microphones;	Appendix F - Section 10.2.5
	– orientation of microphones;	Appendix F - Section 10.2.5
	– special housing that may effect microphone sensitivity (e.g., wind screen, cones, weatherproofing, etc.);	Appendix F - Section 7.2.4.2
	– mounting method (e.g., meteorological tower, pole, etc.);	Appendix F - Section 7.2.4.2
	– device specific settings (e.g., gain/sensitivity, TBC, etc.);	Appendix F - Section 7.3.4.2
	– recording mode (i.e., full spectrum or zero-crossing); and	Appendix F- Section 7.3.4.2
	– a summary of any issues with equipment failure, and a description of procedures used to ensure equipment was operational during deployment (including ensuring microphone sensitivity remains within an acceptable range).	Appendix 10-A1
	▫ note that study design, analysis of acoustic data and interpretation of results would require the services of a bat expert;	Appendix F - Section 10.2.5.2.2
	▫ clearly describe methods used to define a bat “pass” and be consistent with the definition used for any comparison group. Provide a rationale for the chosen method;	Section 13.1.2 Appendix F - Section 10.2.5.1.2
	▫ clearly describe methods used for acoustic identification, including any validation procedures used, criteria used for deciding on species classifications, and software used (including versions and settings); and	Section 13.1.2 Appendix F - Section 10.2.5.2.2
	▫ where results are compared across years, timing of surveys compared, equipment and setup protocols must remain consistent across years.	Section 13.1.2 Appendix F - Section 10.2.5.2.2
	▪ Follow the survey requirements specific to Caribou:	
	▫ provide the best available information from the relevant jurisdiction concerning baseline range population size and trend;	Appendix F - Section 11.3.2.1
	▫ consult with experts of the relevant jurisdiction on appropriate survey methodologies for caribou. Provide a justification for the selected methodologies;	Appendix F - Section 11.3.2.1
	▫ in designing surveys for caribou, the following information sources should be consulted:	
	– integrated Assessment Protocol for Woodland Caribou Ranges in Ontario (IAP) (request from Ontario Ministry of Environment, Conservation and Parks);	Sections 13.2.2.1.2 - 13.2.2.1.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	– general Habitat Description for the forest-dwelling Woodland Caribou (Rangifer tarandus caribou) (GHD)[41]; [41] https://files.ontario.ca/environment-and-energy/species-at-risk/mnr_sar_ghd_car_en.pdf	Section 13.1.2.2.1
	– Ontario's Woodland Caribou Conservation Plan (CCP)[42]; [42] https://files.ontario.ca/environment-and-energy/species-at-risk/277783.pdf	Appendix F - Section 11.3.2.1.2
	– range Management Policy in Support of Woodland Caribou Conservation and Recovery (RMP)[43]; [43] https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery	Section 13.1.1
	– integrated Range Assessment for Woodland Caribou and their Habitat: The Far North of Ontario 2013 (IRAR)[44]; [44] https://files.ontario.ca/environment-and-energy/species-at-risk/Far-North-Ranges-_EN.pdf	Sections 13.3.3.2.1 - 13.6.1
	– Far North Technical Report (FNTR) (request from Ontario Ministry of Environment Conservation and Parks); and	Section 13.1.4
	– Indigenous knowledge holders from across all of the potentially impacted Indigenous groups identified by the Agency.	Section 13.1.4
	▪ For the species identified:	
	▫ provide any published studies that describe the regional importance, abundance and distribution of species at risk, including recovery strategies or plans;	Section 13.1.2.2.1 Section 13.2.2.1.4
	▫ consult relevant published studies that describe suitable survey methodologies for caribou and wolverine based on winter track observations including but not limited to:	
	– caribou resource selection probability functions describing the probability of resource use at the range scale (see Hornseth & Rempel 2016);	Section 13.2.2.1.3
	– caribou, moose, and wolf occupancy models describing their distribution in the far north (see Poley et al. 2014); and	Section 13.1.2.2.1
	– wolverine occupancy models describing the distribution of wolverine in the far north (see Ray et al. 2018).	Section 13.2.2.1.4
	▫ provide data and summary lists for each species at risk ranked according to:	Section 13.2.2
	– abundance;	Section 13.2.2
	– distribution across survey sites (i.e., percentage of survey stations at which they were recorded);	Section 13.2.2
	– abundance in each habitat type; and	Section 13.2.2
	– map showing areas of highest concentrations or areas of use by species.	Section 13.2.2
	▫ data must be supplemented by surveys, as required;	Section 13.2.1
	▫ survey protocols should optimize detectability and survey effort should provide for comprehensive coverage at the appropriate time of year (e.g., survey breeding habitat during breeding season, stopover habitat during migration);	Section 13.2.1
	▫ survey protocols should provide a rationale for the scope of and the methodology used for surveys including design, sampling protocols and data manipulation; and	Section 13.2.1.1.2
	▫ where using recognized standards, provide details of any modifications to the recommended methods and rationale for these modifications and indicate who was consulted in the development of the baseline surveys (e.g., federal/provincial wildlife experts, specialists and local Indigenous groups).	Section 13.2.1.1.2
	▪ Provide information and/or mapping at an appropriate scale (The project study area and local study area, as defined above for each valued component, constitute the appropriate scale) for residences, seasonal movements, movement corridors, habitat requirements, key habitat areas, identified or proposed Critical Habitat and/or recovery habitat (where applicable). Describe the general life history of species at risk (e.g., breeding, foraging) that may occur in the project area, or be effected by the Project;	Section 13.2.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Identify and map all species at risk, critical habitat, and residences on federal land within the project study area and local study area (provincial and/or local government authorities should be contacted to determine any additional data sources and survey methodologies); and	Section 13.1 Section 13.1.2.2.1
	▪ The project study area and local study area, as defined above for each valued component, constitute the appropriate scale.	
	In relation to providing required information for bats, the Impact statement must: ▪ Quantify baseline bat activity (e.g., using acoustic detection to calculate an index of bat activity) to evaluate relative use of different habitats or features in the project area to help support and evaluate project siting decisions or impact predictions. In addition, locate and confirm use of high-value features such as roosts, foraging areas and hibernacula.	Section 12.2.1.1.2 Section 12.2.1.1.3
	In relation to providing required information for caribou, the Impact Statement must: ▪ Describe boreal caribou use of the study areas (e.g., distribution, movement) over time using surveys to complement existing data if data within the project study areas are insufficient or unavailable to be able to understand how caribou use the habitat. Involve province of Ontario for data and survey requirements. Consider Indigenous knowledge and community knowledge;	Section 13.3.3
	▪ Provide a justification for the sensitive periods considered in the assessment. Sensitive periods are associated with caribou life-stages such as calving, wintering, and travel. Ontario has specific sensitive time periods for caribou that are used in the identification, delineation, and consideration of habitat features;	Section 13.1.2.2.1
	▪ Describe the type and spatial extent of biophysical attributes, as defined in Appendix H of the 2019 proposed amended boreal caribou Recovery Strategy[45] present in the study areas; [45] https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/woodland-caribou-boreal-2019.html	Section 11.2.3.3 in Appendix F
	▪ Conduct surveys to complement existing data if data within the project study areas are insufficient or unavailable, to be able to understand where the biophysical attributes occur. Note that identification of biophysical attributes is not dependent on boreal caribou currently being present in the area; and	Section 11.2.3.3 in Appendix F
	▪ Provide the best available information from the Ontario Ministry of Environment, Conservation and Parks on the level of disturbance (anthropogenic vs fire) in the range, consistent with the methodology developed by Environment Canada (2011)[46]. [46] https://wildlife-species.canada.ca/species-risk-registry/document/doc2248p/toc_tdm_st_caribou_e.cfm	Section 11.3.2.1.4 in Appendix F
	In some instances, provincial methodologies may differ from federal recommendations. Consider both methodologies in order to apply the federal 35% habitat threshold, and to determine the amount of habitat disturbance. If provincial disturbance information applies more recent information (i.e., best available), this information should also be considered.	
	COSEWIC provides an annual report listing the designated wildlife species on its website (see Appendix 1 of the TISG).	
9	**Baseline Conditions – Human health**	
	Baseline information is required on existing human health conditions to understand where health inequalities currently exist in all potentially impacted local communities, including municipalities, and Indigenous groups. This information must include the current state of physical, mental and social well- being and incorporate a social determinants of health approach to move beyond biophysical health considerations. . A determinants of health approach recognizes that health is more than the absence of disease, but is rather a state of overall well-being that is impacted by many factors (or determinants), including the social and physical environment and Indigenous views of health. This approach places emphasis on the causes of physical diseases and mental illnesses (i.e., Level-1[47] health determinants: health-related behavioural and biological factors; and Level-2[47] health determinants: service access and social, cultural and economic factors), and as important, on the causes of these causes (i.e., Level-3[47] health determinants: structural and equity factors). Through their effects on well-being, the higher-level determinants of health influence behaviour that, along with human biology, directly impacts physical and mental health. The scope and content of the human health baseline will reflect the specific project context, taking into account input of public and Indigenous groups, and	Appendix P Appendix Q Section 17.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	should include indicators that are meaningful for the effects analysis. [47] Also referred to as proximal, intermediary and distal, respectively. The information provided must:	
	▪ Be sufficient to provide a comprehensive understanding of the current community health status, while respecting the need to protect personal information and standards for the management of Indigenous data (i.e., OCAP[48]); [48] https://fnigc.ca/sites/default/files/docs/ocap_path_to__fn_information_governance_en_final.pdf	Section 17.2 Section 5 in Appendix Q
	▪ Describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;	Section 17.1.4
	▪ Provide disaggregated data and gender statistics;	Section 17.2.2.13
	▪ Conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services; describe any relevant indicators, and how they are reflective of community input;	Section 17.2.2.13
	▪ Identify the environmental and social area of influence of the Project, in preparing the report on baseline health conditions; and	Section 17.3
	▪ The baseline information must be sufficiently disaggregated and analysed to support the analysis of disproportionate effects as per the GBA+ and consideration of disproportionate effects to surrounding communities (e.g., health disparities), including Indigenous communities.	Section 17.2.2.13
	In preparing the report on baseline community health profile, the proponent must identify the environmental and social area of influence of the Project. To understand the community and Indigenous context and baseline health profile, the proponent must:	
	▪ Complete a community health profile that describes the overall health of the community across standard health indicators including any specific community identified health concerns (real or perceived) that may be impacted by the Project;	Section 5 in Appendix Q Section 17.2
	▪ Describe any context-specific definitions of health and well-being, including from the perspective of the relevant Indigenous cultures, including community and spiritual wellbeing;	Appendix Q Section 17.2.2.8 Section 19.5.3
	▪ Describe relevant community and Indigenous history or context, including historical impacts on health, such as intergenerational trauma;	Section 5 in Appendix Q Section 17.2.2.10
	▪ Use a social determinants of health approach to identify and describe the causal chain on relevant health outcomes, including how gender will impact outcomes, across diverse subgroups. Relevant social determinants of health should be selected based on community input, if possible, to reflect the setting and circumstances of the impacted communities. Guidance on selecting relevant determinants may be drawn from the suite of determinants recognized by the Public Health Agency of Canada[49]. Other determinants may also be considered, such as the Determinants of Indigenous Peoples' Health in Canada[50]. [49] https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html [50] https://www.canadianscholars.ca/books/determinants-of-indigenous-peoples-health ▪ Examples of social determinants of health that may be relevant to the Project are provided for consideration:	
	▫ housing availability, housing affordability, and home ownership, disaggregated by sex and gender;	
	▫ access to health services;	Section 17.1.4.2 - Table 17-3
	▫ crowdedness in housing, disaggregated by sex and gender;	Section 17.1.4.2 - Table 17-3
	▫ income (average), poverty and income inequality, disaggregated by sex and gender;	Section 17.1.4.2 - Table 17-3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ food security, access to country foods (traditional foods);	Section 17.1.4.2 - Table 17-3
	▫ education levels (number of residents completed high school, college or higher), disaggregated by sex and gender;	Section 17.1.4.2 - Table 17-3
	▫ proportion of youth who complete high school in the community or from an urban setting, disaggregated by sex and gender;	Section 17.1.4.2 - Table 17-3
	▫ community mental health and well being (including feelings of isolation, remoteness, concern for future generations, and other elements that have been raised in the wake of youth suicides in rural and remote FN communities);	Section 17.1.4.2 - Table 17-3
	▫ social cohesion or social capital;	Section 17.1.4.2 - Table 17-3
	▫ women's safety, including Indigenous women;	Section 17.1.4.2 - Table 17-3
	▫ mobility (proportion of residents who hold driver's licences and own vehicles, intra- and inter-community transportation), disaggregated by sex and gender; and	Section 17.1.4.2 - Table 17-3
	▫ community leadership and governance structure.	Section 17.1.4.2 - Table 17-3
	▪ Complete a community health profile that describes the overall health of the community which may include information on birth rates, death rates, communicable diseases including sexually transmitted infections, injuries, chronic disease rates, and mental health and well- being (e.g., diet, substance use, physical activity) and other community-relevant information (e.g., existing communal activities, support networks and cultural/spiritual practices that may contribute to community resilience), where available through secondary information sources (e.g., Indigenous Services Canada's First Nations Inuit Health Branch, Public Health Agency of Canada, Statistics Canada, provincial and municipal health authorities);	Section 17.2
	▪ Describe and characterize the existing health services and programs and any service delivery arrangements, including health care provider capacity;	Section 17.3.3.12
	▪ Describe how the Project may impact access to health services;	Section 17.3 - Table 17-5
	▪ Describe the current health effects (physical, social, and mental) of geographic isolation and lack of economic development, to better understand the description of potential improvements;	Section 17.2.2
	▪ Provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality (e.g., dust deposition on vegetation), and noise levels. At minimum, provide a map showing approximate locations of permanent residences, temporary land uses (e.g., cabins and traditional sites) and known locations of sensitive human receptors (e.g., schools, hospitals, community centres, retirement complexes or assisted care homes);	Section 16.2.2.4
	▪ Describe drinking water sources which may be effected by the Project, including surface and/or groundwater (permanent, seasonal, periodic or temporary), their distance from project activities and approximate wellhead capture zones;	Section 7.3.1 Section 7.5
	▪ Provide baseline contaminant concentrations in drinking water and in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities. For game animals, the proponent is expected to work with local Indigenous groups to gather tissues- samples, as appropriate;	Section 3.3.5 in Appendix P Appendix O
	▪ Describe the consumption of country foods (traditional foods) outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value. Specify which species are used, quantities, frequency, harvesting locations, and how the data were collected (e.g., site- specific consumption surveys);	Section 17.1.4.2 - Table 17-3
	▪ If a Human Health Risk Assessment is required, provide baseline contaminant concentrations in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities; and	Section 4-6 in Appendix O Section 3.3.5 in Appendix P
	▪ Describe the status of food security and food sovereignty within the Indigenous groups and local communities.	Section 17.1.4.2 - Table 17-3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	The collection, analysis and reporting of data must adhere to relevant ethical and cultural protocols. Guidance for developing the appropriate baseline information relevant to human health is identified in Appendix 1 of the TISG. The proponent should refer to Health Canada guidance documents such that best practices are followed in the collection of baseline information to assess real and perceived project- related impacts to human health due to changes in air quality, noise, drinking and recreational water quality, country foods and/or multiple pathways of exposure to contaminants. The proponent should provide a detailed rationale/explanation for any deviation from recommended baseline characterization approaches and methods, including from Health Canada's guidance, or when determining such characterization is not warranted.	Section 17.5.2.2 Section 3.3.6, Section 3.7.1 and Section 3.8 in Appendix P
10	**Baseline Conditions – Social**	
	Baseline information is required on existing social conditions and must include social well-being and social activities for all potentially impacted local communities, including municipalities, and Indigenous groups. The scope and content of the social baseline conditions should be tailored to the specific project context, take into account community and Indigenous input and priorities, and should include indicators and information that are useful and meaningful for the effects analysis. The information provided must:	
	▪ Describe any relevant indicators and how Indigenous knowledge and engagement contributed to defining them;	Section 14.1.2 Section 14.1.4 Sections 3.1 and 3.4 in Appendix L
	▪ Be sufficient to provide a comprehensive understanding of the current state of each valued component, including relevant trends;	Section 14.2.2 Section 5 in Appendix L
	▪ Describe how community and Indigenous knowledge was used in establishing social baseline conditions, including input from diverse subgroups;	Section 3.1 in Appendix L
	▪ Describe baseline social conditions using disaggregated data and gender-statistics for diverse subgroups within the community to support GBA+; and	Section 3.3. in Appendix L
	▪ Conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services.	Section 3.3 in Appendix L Section 3 in Appendix M:
	In preparing a baseline, the proponent must identify the social area of influence of the Project and prepare a community profile. To understand the community context, the information provided must describe:	
	▪ Influences on community well-being, including youth mental health, current expectations within the community for the Project to bring social and economic development opportunities and implications of the Project not being realized;	Section 14.2.2.7 Section 5 in Appendix L Section 5 in Appendix Q:
	▪ Access, ownership and use of resources (e.g., land tenure, forestry, minerals, aggregate, food, water, social infrastructure, current road systems and seasonal roads), including ownership of land surrounding water crossings;	Section 8 in Appendix L Section 16.2
	▪ Access to and control over resources from a gender perspective (e.g., information, knowledge and services);	Appendix M
	▪ Capacity (currently available or planned) of institutions to deliver public services and infrastructure;	Section 14.2.2.3 Section 14.2.2.6 Sections 5.3 and 5.7 in Appendix L
	▪ Relevant historical community background;	Section 4 in Appendix L Section 19.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Applicable history with previous developers, including historical and recent proponents of mineral and other natural resource exploration and development projects and aspirations for future social and economic development; and	Section 5-8 in Appendix L
	▪ Any issues or concerns related to the cost of living, particularly with respect to food prices, energy prices, and housing/rental costs.	Section 14.2.2. Section 5 in Appendix L
	Information related to interested parties, those likely to be impacted directly and indirectly by the Project should be provided in association with a consideration of those in the community who are considered particularly vulnerable to changes brought about by the Project. Baseline information must be sufficiently disaggregated and analysed to understand the differences in norms, roles and relations for diverse subgroups; the different level of power they hold; their differing needs, constraints and opportunities; and the impact of these differences in their lives, including consideration of disproportionate effects to surrounding communities. The Impact Statement must provide information on the following social conditions:	
	▪ Social Services:	
	▫ public services available (e.g., childcare, eldercare, communication services, social and cultural support).	Section 14.2.2.3 Section 5.3 and Section 5.7 in Appendix L
	▪ Education:	
	▫ education programs including elementary and secondary programs available in the community and the need to access programs outside the community;	Section 14.2.2.4 Section 5.5 in Appendix L
	▫ apprenticeships and training initiatives (e.g., Kiikenomaga Kikenjigewen Employment & Training Services[51], Mushkegowuk Council Employment & Training Services[52], Northern Ontario Internship Program[53], etc.) [51] http://www.kkets.ca/ [52] http://www.mushkegowuk.com/?page_id=2100 [53] https://nohfc.ca/en/pages/programs/northern-ontario-internship-program	Section 14.2.2.4 Section 5.5 in Appendix L
	▫ traditional education components that could potentially be impacted by the Project.	Section 14.2.2.4 Section 14.3.4 Section 5.5 in Appendix L
	▪ Housing:	
	▫ baseline information regarding housing occupancy rates and general housing conditions and how it compares to other Indigenous groups in the area/regional/ provincial/territorial averages;	Section 14.2.22 Section 5.2 in Appendix L
	▫ the general patterns of human occupancy including information on year round vs seasonal residents, quality and quantity of housing stock and crowding within the project study areas; and	Section 14.2.22 Section 5.2 in Appendix L
	▫ overview of the local housing market, including a description of housing conditions and needs, and the general condition of the housing stock.	Section 14.2.22 Section 5.2 in Appendix L
	▪ Recreation:	
	▫ describe the current use of land and water bodies in the study area for outdoor recreational and teaching purposes, including youth recreation, recreational hunting, fishing, trapping, and gathering.	Section 16.2.2.4 Section 5.4 in Appendix L
	▪ Navigation:	
	▫ existing navigable waterways and navigation use including type, volume, seasonality, manoeuvrability, and physical characteristics (e.g., width, depth, etc.), bank/bottom features, biological components, flow/tides, etc.;	Section 16.2.2.4 Section 5.8 in Appendix L

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ describe past, current, and anticipated future use of all waterways and waterbodies, including recreational uses by Indigenous groups and the public (including special events, fishing, cottagers, etc.);	Section 16.2.2.4 Section 5.8 in Appendix L
	▫ describe the use of waterways with Indigenous cultural importance (e.g., Albany River, Winisk River, Muketei River and Attawapiskat Rivers); and	Section 16.2.2.4 Section 5.8 in Appendix L
	▫ potential of obstructions, restrictions, or expansions of access to navigable waterways (e.g., portage routes and access roads).	Section 5.8 in Appendix L
	▪ Community Cohesion:	
	▫ basic demographic characteristics of the community;	Section 14.2.2.7 Section 5.9 in Appendix L
	▫ relevant community background and historical experience with similar infrastructure and/or resource development projects;	Section 14.2.2.7 Section 5.9 in Appendix L
	▫ describe the proportion of community members who live in the community year- round; and	Section 14.2.2.7 Section 5.1 and 5.9 in Appendix L
	▫ describe social cohesion or social capital, including factors such as community/neighbourhood involvement, social networks/support, and social well- being, including inter-community relationships.	Section 14.2.2.7 Section 5.9 in Appendix L
	▪ Public Safety:	
	▫ crime rates, substance use and how they compare to other Indigenous groups in the area/regional/provincial/territorial averages;	Section 14.2.2.7 Section 5.9 in Appendix L
	▫ information on Indigenous women's safety and rates of gender-based violence	Section 14.2.2.7 Section 5.9 in Appendix L
	▫ community gender-based violence rapid assessment; and	Section 14.2.3.7 Section 5.9 in Appendix L Appendix M
	▫ existing police, fire services, and other public safety services.	Section 14.2.2.5 Section 5.6 and 5.9 in Appendix L
	▪ Culture:	
	▫ structures, sites and things of historical, archaeological, paleontological, cultural, spiritual or architectural significance.	Section 20.2.2 Section 3 and Section 4 in Appendix S Section 7 in Appendix L
	Baseline data can often be found in secondary information sources, such as census data, government publications and academic literature. Where secondary sources are unable to provide the required information, primary sources such as surveys, key informant interviews, focus groups or other primary research methods should be used. The collection, analysis and reporting of data must adhere to relevant ethical and cultural protocols (see references above). Additional guidance is identified in Appendix 1 of the TISG.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
11	**Baseline Conditions – Economic**	
	This economic baseline should document the local and regional economic conditions and trends based on the spatial and temporal boundaries selected, and must include economic indicators and activities for all potentially impacted local communities, including municipalities, and Indigenous groups. The scope and content of the economic baseline should be tailored to the specific project context, take into account community and Indigenous group input, and should include indicators and information that are useful and meaningful for the effects analysis. The information provided must:	Section 15.2 Section 6 in Appendix L
	▪ Be sufficient to provide a comprehensive understanding of the current state of each valued component, including relevant trends;	Section 15.2 Section 6 in Appendix L
	▪ Describe how community and Indigenous knowledge from related populations, including input from diverse groups, was used in establishing baseline conditions;	Section 3.1 and 3.4 in Appendix L
	▪ Describe baseline economic conditions using disaggregated data and gender-statistics for diverse subgroups within the community to support GBA+;	Section 6 in Appendix L Section 3 in Appendix M
	▪ Conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services; and	Section 3.3 and 6 in Appendix L Section 3 in Appendix M
	▪ Cescribe any relevant indicators.	Section 15.1.4 Section 6 to 8 in Appendix L
	Information on those likely to be impacted directly and indirectly by the Project should be provided in association with a consideration of those in the community who are considered particularly vulnerable to changes brought about by the Project. As applicable, the baseline information must be sufficiently disaggregated and analysed to support the analysis of disproportionate effects as per GBA+.	Section 3 in Appendix M
	The Impact Statement must provide information on the following economic conditions related to the Project and the economic opportunities:	
	▪ Labour market:	
	▫ labour supply and demand;	Section 15.2.2.1 Section 6.1 in Appendix L
	▫ Local and regional labour force characteristics, disaggregated by ethnicity or indigeneity, age, sex, gender and other community relevant factors to support analysis, where appropriate, including the employment rate, the unemployment rate, employment by industry, employment status (e.g., full-time, part-time, self- employed, seasonal), average monthly earnings;	Section 15.2.2.1 Section 6.1 in Appendix L
	▫ known barriers and opportunities to employment for underrepresented groups, proportion of time spend on unpaid domestic and care work, by age, sex and location, and gender division of labour;	Section 15.2.2.1 Section 6.1 in Appendix L
	▫ information on local construction businesses and joint ventures, equipment availability and general competing projects in the community;	Section 15.2.2.3 Section 6.3 in Appendix L
	▫ housing and consumer prices; and	Section 14.2.2.2, Section 5.2 in Appendix L
	▫ a description of housing conditions and needs.	Section 14.2.2.2, Section 5.2 in Appendix L

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Business environment:	
	▫ sources of individual and community income (e.g., market economy, government transfer payment etc.);	Section 15.2.3.3 Section 6.3 in Appendix L
	▫ the main industries and largest employers, and any opportunities for local/regional businesses to benefit from the Project;	Section 15.2.3.3 Section 6.3 in Appendix L
	▫ broader economic contributors to the regional economy, such as small businesses (e.g., nature and outdoor tourism);	Section 15.2.3.2 Section 6.2 and 6.3 in Appendix L
	▫ local traditional, subsidized and market economies, and current market trends;	Section 15.2.3.2, Section 6.2 and 6.3 in Appendix L
	▫ any commercial fisheries that may be impacted, including species fished, number of licences, and value of fisheries, where applicable;	Section 8.3 in Appendix L
	▫ access, ownership and use of lands and resources (e.g., land tenure, mineral claims, mineral exploration, aggregate, food, water, social infrastructure), including ownership of land surrounding water crossings; and	Section 8 in Appendix L
	▫ access and control over resources from a gender perspective (e.g., information knowledge and services).	Appendix M
	▪ Infrastructure:	
	▫ access to infrastructure and services (transportation, electricity, telecommunications infrastructure and broadband, etc.);	Section 14.2.2.6 Section 5.7 in Appendix L
	▫ details on the existing road network (all weather and winter roads) and traffic patterns, including any projections of future traffic patterns;	Section 5.8 in Appendix L
	▫ information on the nearest railways and airports; and	Section 5.8 in Appendix L
	▫ an overview of other infrastructure (e.g., power plants, transmission lines, pipelines, dams, water mains, sewage lines) relevant to the Project.	Section 5.8 in Appendix L
	▪ Public finances:	
	▫ a brief overview of the state of local public finances.	Section 15.2.2.4 Section 6.4 in Appendix L
	▪ Overall economy:	
	▫ a brief overview of the regional economy in recent years (e.g., if there have been any major investments or closures, if the area's resources and products have been in high or low demand, etc.);	Section 15.2.2.2 Section 6.2 in Appendix L
	▫ a summary of any existing local or regional economic development plans and forest management plans;	Section 15.2.2.2 Section 16.2 Section 6 and 8 in Appendix L
	▫ income leakages from the communities to capture services that are being delivered outside of the community;	Section 6 in Appendix L
	▫ economic opportunities in and around the community including employment and business opportunities;	Section 15.2 Section 6 in Appendix L
	▫ service gaps and community capacity to implement economic development plans and initiatives that provide the rationale for the Project;	Section 16.2 Section 6.2.1.2 in Appendix L
	▫ financial resources (own-source revenues, government revenues, etc.);	Section 15.2 Section 6.4 in Appendix L

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ a brief overview of the community's power source, fuel consumption to generate power, and any issues related to power distribution in the community; and	Section 6.2 in Appendix L
	▫ access to capital.	Section 15.2 Section 6.2 in Appendix L
12	**Baseline Conditions - Indigenous Peoples**	
	Proponents are required to engage with Indigenous groups in developing baseline conditions, in order to identify and understand the potential impacts of their projects on Indigenous peoples, the exercise of Aboriginal and Treaty rights and to incorporate Indigenous knowledge into the impact assessment. The results of any engagement should be presented in the Impact Statement, and, as best as possible should reflect the perspective of the Indigenous peoples involved. If an Indigenous group has chosen not to participate, the proponent should identify the community and provide evidence of efforts to engage.	Section 19.1.2 Section 19.1.3 Section 19.2
	The proponent is required to provide an opportunity for Indigenous groups to review the information that pertains to them prior to submission of the Impact Statement. The Impact Statement must indicate where input from Indigenous groups has been incorporated, including Indigenous knowledge. To the extent possible, information should be specific to the individual Indigenous group(s) involved in the assessment, and describe contextual information about the members within an Indigenous group (e.g., women, men, Elders and youth).	Section 19.1.2 Section 19.1.3 Section 19.2
	Where Indigenous groups do not wish to participate, the proponent is encouraged to continue sharing information and analysis with the Indigenous groups of the potential effects of the Project, and to use available public sources of information to support the assessment.	Section 19.3 Section 19.5
	The proponent is encouraged to consult Agency guidance on engaging Indigenous groups, in particular, *Interim Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples*[54] under the *Impact Assessment Act*. [54] https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/interim-guidance-assessment-potential-impacts-rights-indigenous-peoples.html	Section 19.1 Section 19.5 Section 19.6
	Where possible, the Impact Statement should include contextual information, both historic and current, regarding an Indigenous group's history and cultural practices, land use, as well as the manner in which rights of Indigenous peoples are, or may be, exercised and impacted by the Project, as identified by the Indigenous groups. The contextual information may include the following:	
	▪ The physical and cultural heritage of each Indigenous group;	Section 3 and Section 4 in Appendix S Section 19.2
	▪ The current use of lands and resources for traditional purposes (including those uses that may have ceased due to external factors);	Section 7 in Appendix L Section 19.2
	▪ The health, social, and economic conditions of Indigenous peoples; and	Section 7 in Appendix L Section 15.2.2.2.3 Section 15.2.24 Section 17.2 Section 19.2
	▪ Nature and extent of the rights exercised.	Section 7 in Appendix L Section 19.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
12.1	**Physical and Cultural Heritage**	
	The Impact Statement should include a description of the historical baseline conditions associated with Indigenous cultures. This description should give consideration to understanding historical baseline conditions associated with ability to transmit culture (e.g., through language, ceremonies, harvesting, teaching of sacred laws, traditional laws, stewardship laws, traditional knowledge).	Section 19.2 Section 4 in Appendix S
	Indigenous physical and cultural heritage is considered to include, but is not limited to, any site, structure or thing of archaeological, paleontological, historical or architectural significance. Refer to Agency Guidance in Appendix 1 of the TISG.	Section 20.2.2 Section 3 and Section 4 in Appendix S
	Information with respect to Indigenous groups can include:	
	▪ Burial sites;	Section 19.2 Section 20.2.2 Section 3 and Section 5 in Appendix S
	▪ Cultural landscapes;	Section 20.2.2 Section 5.3 in Appendix S
	▪ Oral histories;	Section 19.2
	▪ Cultural values and experiences of being on the land, including harvesting specific resources;	Section 19.2
	▪ Indigenous governance systems and Indigenous laws tied to the landscape;	Section 19.2
	▪ Sacred, ceremonial or culturally important places, plants, animals, objects, beings, or things; and	Section 19.2 Section 3 and Section 4 in Appendix S
	▪ Archaeological potential and/or artefact places.	Section 5 in Appendix S
12.2		
	The Impact Statement should include information on the current use of lands and resources for traditional purposes (e.g., hunting, fishing, trapping, plant gathering, ceremonial or spiritual practices) of all potentially impacted Indigenous groups. Proponents are encouraged to refer to guidance on the Agency's website on how to consider the current use of lands and resources for traditional purpose. In general, the Impact Statement should consider:	
	▪ Location and description of Treaty rights, title area, land claims, or traditional territory (including maps where available) of all Indigenous groups identified by the Agency;	Section 19.2 Appendix L: Section 4.1 Section 4.2 Section 7.1 Section 7.2 Section 8.1
	▪ Location of reserves and communities;	Section 19.1 Section 19.2 Appendix L Section 4.1 Section 4.2 Section 8.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Traditional activities presently or historically practiced (e.g., hunting, fishing, trapping, gathering of plants or medicines, ceremonial or spiritual practices, passing on of Indigenous knowledge and/or language);	Section 19.2 Appendix L: Section 7.1 Section 7.2
	▪ location of traditional uses, including hunting, trapping, and fishing camps, cabins, and gathering or teaching grounds;	Section 19.2 Appendix L: Section 7.1 Section 7.2
	▪ Types of traditional resources such as fish, wildlife, birds, plants, or other natural resources and their habitats of importance for supporting traditional use;	Appendix L: Section 7.1 Section 7.2 Section 19.2
	▪ Places where culturally important fish, wildlife, birds, plants, or other natural resources are harvested;	Appendix L: Section 7.1 Section 7.2 Section 19.2
	▪ Access and travel routes for conducting traditional practices;	Appendix L: Section 7.1 Section 7.2 Section 19.2
	▪ Frequency, duration, and/or timing of traditional practices;	Appendix L: Section 7.1 Section 7.2 Section 19.2
	▪ Where known, efforts of the groups to bring back traditional practices;	Section 7 in Appendix L Section 19.2
	▪ Description of country foods (traditional foods);	Section 19.2 Appendix O: Section 4
	▪ The quality and quantity of resources (e.g., preferred species and perception of quality);	Section 19.2
	▪ Access to resources (e.g., physical access to harvest specific species, culturally important harvesting locations, timing, seasonality, distance from community);	Section 7 in Appendix L Section 19.2
	▪ The experience of the practice (e.g., connection to the landscape without artificial noise and sensory disturbances, air quality, visual landscape, perceived or real contamination, etc.); and	Section 7 in Appendix L Section 19.2
	▪ Other current uses identified by Indigenous groups.	Section 7 in Appendix L Section 19.2
	Should this type of information be found through public sources, the proponent should advise the Indigenous group and offer a reasonable opportunity to review and comment before including it in the Impact Statement.	Record of Engagement and Consultation

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
12.3	**Health, Social and Economic Conditions**	
	The baseline conditions requirements set out in the sections above for health, social and economic conditions, include Indigenous peoples and GBA+ specific to Indigenous peoples.	Section 14.2 Section 15.2 Section 17.2 Section 19.2 Appendix L: Section 5 Section 6 Appendix M Section 3 Appendix Q
12.4	**Conditions Related to the Rights of Indigenous Peoples**	
	The Impact Statement should document the nature and extent of the exercise of rights of Indigenous peoples, potentially impacted by the Project, as identified by the Indigenous group(s). Indigenous groups may also provide their perspective through consultations with the Agency. This information related to rights may include, but is not limited to:	
	▪ A general description of the section 35 rights exercised in the area of the Project, including the historic, regional and community context;	Appendix L Section 8.1.1 Section 19.1 Section 19.2 Section 19.5
	▪ The quality and quantity of resources required to support exercise of rights (e.g., preferred species, level of health of preferred species, volume of preferred species);	Section 7 in Appendix L Section 19.2
	▪ Access to the resources required to exercise rights (e.g., physical access to culturally important places, timing, seasonality, distance from community);	Section 7 in Appendix L Section 19.2 L
	▪ The experience associated with the exercise of rights (e.g., noise and sensory disturbances, air quality, visual landscape);	Section 7 in Appendix L Section 19.2
	▪ Specific areas of cultural importance where rights are exercised;	Section 7 in Appendix L Section 19.2
	▪ Landscape conditions that support the Indigenous group's exercise of rights (e.g., large, intact and diverse landscapes, areas of solitude; connection to landscape);	Section 7 in Appendix L Section 19.2
	▪ Where possible, information about members within an Indigenous group, and their role in the exercise of rights (e.g., women, men, Elders, youth, people with disabilities);	Section 7 in Appendix L Section 19.2
	▪ How the Indigenous group's cultural traditions, laws and governance systems inform the manner in which they exercise the rights (the who, what, when, how, where and why);	Section 7 in Appendix L Section 19.2
	▪ Where they exist, identification of thresholds identified by the community that, if exceeded, may impair the ability to meaningfully exercise of rights*;*	Section 7 in Appendix L Section 19.2 Section 19.5
	▪ Maps and data sets (e.g., overlaying the project footprint, places of cultural and spiritual significance, traditional territories, fish catch numbers); and	Section 19.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Pre-existing (real or perceived) impacts and cumulative effects that are already interfering with the ability to exercise rights or to pass along Indigenous cultures and cultural practices (e.g., language, ceremonies, Indigenous knowledge).	Section 19.3 Section 19.5 Section 19.6
13	**Effects Assessment**	
13.1	**Methodology**	
	The Impact Statement must describe in detail the project's potential adverse and positive effects in relation to each phase of the Project (construction, operation, maintenance, suspension, decommissioning, and abandonment). The environmental, health, social or economic effects should be described in terms of the context, magnitude, geographic extent, ecological context timing, duration and frequency, and whether effects are reversible or irreversible. The spatial scoping of the assessment will vary depending on the valued component and should be consistent with the spatial boundaries that were established for baseline data collection. If there is an ongoing or completed regional assessment in the proposed project area, the proponent should use the information generated through that process to inform the effects assessment. As applicable, the effects assessment must be sufficiently disaggregated and analysed to understand differences in norms, roles and relations for diverse subgroups; the different level of power they hold; their differing needs, constraints and opportunities, and the effects of these differences in their lives including consideration of disproportionate effects to surrounding communities.	Section 6.3 Section 7.3 Section 8.3 Section 9.3. Section 10.3 Section 11.3 Section 12.3 Section 13.3 Section 14.3 Section 15.3 Section 16.3 Section 17.3 Section 18.3 Section 19.3 Section 20.3
	The assessment of the effects of each of the project components and physical activities, in all phases, must be based upon a comparison of baseline environmental, health, social and economic conditions and the predicted future conditions with the Project and the predicted future conditions without the Project. Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption.	Section 6.3 Section 7.3 Section 8.3 Section 9.3. Section 10.3 Section 11.3 Section 12.3 Section 13.3 Section 14.3 Section 15.3 Section 16.3 Section 17.3 Section 18.3 Section 19.3 Section 20.3
	The description of the effects can be either qualitative or quantitative. Effects must be described using criteria to quantify or qualify adverse effects, taking into account any important contextual factors. With respect to quantitative models and predictions, the Impact Statement must detail the model assumptions, parameters, the quality of the data and the degree of certainty of the predictions obtained. For other effects, it may be more appropriate to use other criteria, such as the nature of the effects, directionality, causation and probability. The effects assessment should also set out the probability or likelihood of that effect occurring and describe the degree of scientific uncertainty related to	Section 6.5 Section 7.5 Section 8.5 Section 9.5 Section 10.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	the data and methods used. With respect to qualitative predictions, the effects assessment should also present information on the parameters measured, and sources and quality of data.	Section 11.5 Section 12.5 Section 13.5 Section 14.5 Section 15.5 Section 16.5 Section 17.5 Section 18.5 Section 19.5 Section 20.5
	The effects assessment should acknowledge and describe the quality of the input assumptions to help with interpreting exposure and risk uncertainties.	Sections 6 to 20 (refer to Prediction Confidence in the Assessment)
	The effects to each valued component outlined in sub-sections 14.3, 15.2, 15.3, 15.4 must be described using the following criteria[55]: [55] https://www.natureserve.org/sites/default/files/publications/files/natureserveconservationstatusfactors_apr12_1.pdf	Section 6 to 20 (refer to Characterization of Net Effects)
	▪ Scope, defined spatially as the proportion of the valued component's occurrence or population within the study areas (project study area, local study area and regional study area) that can reasonably be expected to be affected by the predicted effect within 10 years. Characterize the scope of each predicted adverse effect on each valued component as follows:	
	▫ pervasive: the effect is likely to be pervasive in its scope, affecting the valued component across all or most (71-100%) of its occurrence or population within the study areas;	
	▫ large: the effect is likely to be widespread in its scope, affecting the valued component across much (31-70%) of its occurrence or population within the study areas;	
	▫ restricted: the effect is likely to be restricted in its scope, affecting the valued component across some (11-30%) of its occurrence or population within the study areas; and	
	▫ small: the effect is likely to be very narrow in its scope, affecting the valued component across a small proportion (1-10%) of its occurrence or population within the study areas.	
	▪ Severity, defined as, within the scope, the level of damage to the valued component from the effect that can reasonably be expected; typically measured as the degree of destruction or degradation within the scope or the degree of reduction of the population within the scope. Characterize the severity of each predicted adverse effect on each valued component as follows:	
	▫ extreme: within the scope, the effect is likely to destroy or eliminate the valued component or reduce its population by 71-100% within ten years or three generations;	
	▫ serious: within the scope, the effect is likely to seriously degrade/reduce the valued component or reduce its population by 31-70% within ten years or three generations;	
	▫ moderate: within the scope, the effect is likely to moderately degrade/reduce the valued component or reduce its population by 11-30% within ten years or three generations; and	
	▫ slight: within the scope, the effect is likely to only slightly degrade/reduce the valued component or reduce its population by 1-10% within ten years or three generations.	

<table>
<tr><th>TISG Section</th><th>TISG Requirements</th><th>EAR/IS Section Where Requirement is Addressed</th></tr>
<tr><td></td><td>▪ Irreversibility, or permanence, is defined as the degree to which the effect can be reversed and the valued component restored, if the effect no longer existed. Characterize the irreversibility of each predicted adverse effect on each valued component as follows:</td><td rowspan="8"></td></tr>
<tr><td></td><td>▫ very high: the effects cannot be reversed and it is very unlikely the valued component can be restored, and/or it would take more than 100 years to achieve this (e.g., wetlands converted to a shopping center);</td></tr>
<tr><td></td><td>▫ high: the effects can technically be reversed and the valued component restored, but it is not practically affordable and/or it would take 21-100 years to achieve this (e.g., wetland converted to agriculture);</td></tr>
<tr><td></td><td>▫ medium: the effects can be reversed and the valued component restored with a reasonable commitment of resources and/or within 6-20 years (e.g., ditching and draining of wetland); and</td></tr>
<tr><td></td><td>▫ low: the effects are easily reversible and the valued component can be easily restored at a relatively low cost and/or within 0-5 years (e.g., off-road vehicles trespassing in wetland).</td></tr>
<tr><td></td><td>▪ Characterize the magnitude of each predicted adverse effect on each valued component as follows:</td></tr>
<tr><td></td><td>▫ magnitude = scope x severity as below:
<table>
<tr><td rowspan="2">Severity</td><td colspan="4">Scope</td></tr>
<tr><td></td><td>Pervasive</td><td>Large</td><td>Restricted</td><td>Small</td></tr>
<tr><td></td><td>Extreme</td><td>Very High</td><td>High</td><td>Medium</td><td>Low</td></tr>
<tr><td></td><td>Serious</td><td>High</td><td>High</td><td>Medium</td><td>Low</td></tr>
<tr><td></td><td>Moderate</td><td>Medium</td><td>Medium</td><td>Medium</td><td>Low</td></tr>
<tr><td></td><td>Slight</td><td>Low</td><td>Low</td><td>Low</td><td>Low</td></tr>
</table></td></tr>
<tr><td></td><td>▪ Characterize the degree of each predicted adverse effect on each valued component as follows:</td></tr>
<tr><td></td><td>▫ degree of effect = magnitude x irreversibility
<table>
<tr><td rowspan="2">Magnitude</td><td colspan="4">Irreversibility</td></tr>
<tr><td></td><td>Very High</td><td>High</td><td>Medium</td><td>Low</td></tr>
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<tr><td></td><td>High</td><td>Very High</td><td>High</td><td>High</td><td>Medium</td></tr>
<tr><td></td><td>Medium</td><td>High</td><td>Medium</td><td>Medium</td><td>Low</td></tr>
<tr><td></td><td>Low</td><td>Medium</td><td>Low</td><td>Low</td><td>Low</td></tr>
</table></td></tr>
<tr><td></td><td>Effects may impact communities, Indigenous groups and stakeholders in different ways, and therefore they may respond differently to them. Determining and characterizing effects should be based largely on the level of concern expressed through engagement with the impacted Indigenous groups and community members. The proponent is required to gather and consider Indigenous knowledge from potentially impacted Indigenous communities to inform the Project's effects assessment and to describe how Indigenous knowledge was considered in their Impact Statement. There are tools that can assist with these predictions and analyses, including multi-criteria analysis, risk assessment, modelling, in addition to seeking out expert and stakeholder input. Effects should be characterized using language most appropriate for the effect (e.g., impacts on the exercise of Aboriginal and Treaty rights and social effects may be described differently from biophysical effects).</td><td>Sections 6 to 20 (refer to Incorporation of Input from Engagement and Consultation Activities and Incorporation of Indigenous Knowledge and Land and Resource Use Information)</td></tr>
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TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	Consider whether the Impact Statement goes beyond citing data and identifies and analyzes the differential effects. Consider also whether the Impact Statement examines intersections of identities such as gender, Indigeneity and rurality, and considers underlying causes for these potential effects.	Sections 14 to 20
13.2	**Interactions Between Effects and Valued Components**	Sections 6 to 20 (refer to Identification of Project Interactions)
	Although the requirements set out in these guidelines are separated by environmental, health, social or economic conditions and elements, the Impact Statement must consider and describe the interactions between the environmental, health, social and economic effects as well as the interaction and interconnectedness of selected valued components taking into account values of local communities, including municipalities and Indigenous groups.	
	For example, an adverse environmental effect on water could also have an adverse effect on human health. That same adverse environmental effect on the physical component, water, could result in an adverse environmental effect on the biological component fish, that could in turn, have an adverse social effect on fishing and/or an adverse economic effect on an outfitter that provides guiding services. Alternatively, this pathway could also be impacted by a positive effect on water (e.g., in remediation-related projects). Considering and describing effects holistically, both positive and negative, requires taking a systems approach that considers interactions between valued components and with other environmental, health, social and economic factors. The holistic nature of Indigenous Knowledge that is provided may contribute to this approach.	
14	**Predicted Changes to the Physical Environment**	
	Changes to the components of the physical environment outlined below are interrelated with other components as part of the broader ecosystem. The description of changes to the physical environment is to be integrated into the effects assessment of each valued component and the interaction between valued components in the Impact Statement	Sections 6 to 20 (refer to Identification of Project Interactions)
14.1	**Changes to the Atmospheric, Acoustic, and Visual Environment** The Impact Statement must:	
	▪ Provide a quantitative assessment of common air pollutants (total particulate matter, fine particulate matter (PM2.5), respirable particulate matter with a diameter less than 10 microns (PM10), sulphur oxides, nitrogen oxides, volatile organic compounds polycyclic aromatic hydrocarbons, diesel particulate matter, and carbon monoxide), as well as any air contaminants potentially associated with the Project such as dust resulting from construction activities and ongoing vehicle use during operations or maintenance of the gravel road bed;	Section 9.3
	▪ Provide an assessment of the Project's emissions potentially contributing or adding to existing ground ozone levels;	Section 9.3
	▪ Provide a comprehensive list of project activities (air pollutant emission sources) that may affect ambient air quality, such as, but not limited to:	Section 9.3.1
	▫ the use of heavy machinery such as construction equipment;	
	▫ vehicles and diesel generators during construction;	
	▫ blasting activities;	
	▫ exhaust emissions due to increased vehicular traffic during construction and operations; and	
	▫ dust generation from material stockpiles, transportation and road maintenance during construction and operation.	
	▪ Include an atmospheric dispersion model of the common air pollutants in order to estimate the contaminant concentrations present in the entire area that could potentially be affected by atmospheric emissions resulting from project activities (air pollutant emission sources);	Section 9.3.1.1
	▪ Provide appropriately scaled contour map(s) plotting the predicted emission concentrations (isopleths). The choice of air quality model must be appropriate for the complexity of sources, terrain and meteorology;	Appendix G
	▪ Provide details of all air quality model configuration, including meteorology, land-use, gridded and sensitive receptors and chemical and physical transformation settings;	Section 9.3.1.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Assess the potential for emissions from the Project to contribute to acid deposition and exceedances of critical loads for terrestrial and aquatic ecosystems;	Section 6 of Appendix G
	▪ Describe the source characteristics (e.g., point emissions, area sources, incineration emissions, and fugitive sources, including dust generated by exposed soils that are cleared and stockpiled);	Section 9.3.1 Section 9.3.2 Section 9.3.3 Section 9.3.4
	▪ Provide emission rates for all project and regional sources within the study area, including emission factors (with methodology, uncertainty assessment and references) and all assumptions and related parameters that would enable calculations to be reproduced;	Section 9.3.1
	▪ Use established methods for estimating emissions from on-road and off-road activities;	Section 9.3.1 Section 9.3.2
	▪ Provide a comparison of predicted air quality concentration against the *Canadian Ambient Air Quality Standards* (CAAQS) for fine particulate matter (PM2.5), sulphur dioxide (SO2) and nitrogen dioxide (NO2), and ozone (O3). Predicted concentrations for other air pollutants relevant to the project, such as dust resulting from construction activities and ongoing vehicle use during operations or maintenance of the gravel roadbed, should be compared with appropriate provincial and territorial guidelines. The assessment against CAAQS should be based on the principles of “keeping clean areas clean” and “continuous improvement”, and in the context of air sheds and air zones with the Air Quality Management System;	Section 9.2.2.1 Appendix G
	▪ For air pollutants with numerical standards and/or established air quality criteria [e.g., Canadian Ambient Air Quality Standards (CAAQS), or Ontario Ambient Air Quality Criteria (AAQC)], observe the averaging time period and the statistical form associated with each numerical standard;	Section 9.2.2.1 Appendix G
	▪ Provide a description of all methods and practices (e.g., dust suppression strategies and guidelines, control equipment) to be implemented to reduce and control emissions. If the best available technologies are not included in the Project design, the proponent needs to provide a rationale for the technologies selected;	Section 9.4 Appendix G
	▪ Provide details of the achievement of emission standards for all mobile and stationary engines used in the Project;	Section 9.4 Appendix G
	▪ Provide justification for all control efficiencies used to reduce emission rates of sources within the model, including details of all assumptions associated with the related mitigation measures, and their achievability;	Section 9.4 Appendix G
	▪ Describe changes in ambient vibration and other sound levels resulting from the Project at potential receptor locations, including changes to the perception of non-anthropogenic sounds;	Section 9.3.3 Section 9.3.4 Appendix J
	▪ Quantify sound levels at appropriate distances from any Project facility and/or activities and describe for each contributing source the timing (e.g., hours of night-time activities), number and duration of noise events and their sound characteristics, including frequency spectrum;	Section 9.2.2.3 Appendix J
	▪ Provide the hourly distribution of baseline noise events at night in comparison to predicted individual noise events at night at each receptor location;	Section 9.2.2.3 Appendix J
	▪ Describe the locations and characteristics of the most sensitive receptors including species at risk and differential effects for sensitive receptors;	Section 9.2.2.3.2 Appendix J
	▪ Describe consultation with regulators, stakeholders, community groups, landowners and Indigenous groups about potential effects to the atmospheric, acoustic, and visual environment;	Section 9.1.2 Section 9.1.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Consider the expectation of peace and quiet at receptors (e.g., in a quiet rural area or during Indigenous land use) and the applicable community-based policies concerning noise (e.g., complaints resolution processes);	Section 9.3.3
	▪ Identify and justify the approach to determine the extent to which sound effects resulting from the Project are adverse and describe any changes in night-time light levels as a result of the Project; and	Section 9.3.3
	▪ Describe any positive changes.	Section 9.3.3
	Additional guidance regarding air quality, health and noise effects is identified in Appendix 1 of the TISG.	-
14.2	**Changes to Groundwater and Surface Water**	
	With respect to potential project effects on the physical hydrogeological system, the Impact Statement must:	
	▪ Provide a project-specific water use assessment identifying and describing the quantity and quality of water resources potentially affected by the Project, including:	
	▫ any withdrawal of groundwater or surface water;	Section 8.3.5
	▫ changes to the groundwater recharge/discharge areas;	Section 8.3
	▫ temporal and spatial changes in groundwater quantity, quality and flow (e.g., long- term changes in water levels), including how these changes may relate to domestic, communal or municipal water supply wells;	Sections 8.3.1 to 8.3.7
	▫ the flow or volume of water available in the water bodies; and	Section 7.2 Section 8.2
	▫ how any waste waters or dewatering water would be managed and where it would be discharged.	Section 8.4.5
	With respect to potential project effects on water quality in the receiving environment, the Impact Statement must:	
	▪ Present any applicable water management plan, including for any aggregate sources and stockpiles;	Section 7.10 Section 8.3 Section 8.10
	▪ Present estimates of surface water runoff rates for major project components, including aggregate and overburden stockpiles;	Section 7.3 Section 7.5
	▪ Describe any applicable water quality treatment measures and provide evidence supporting the effectiveness of these measures;	
	▪ Compare the quality of all effluent streams to the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for the Protection of Aquatic Life, and to provincial water quality objectives for contaminants of concern (e.g., arsenic, chromium, mercury) that do not have CCME guidelines. CCME's Water Quality Guideline values are national science-based voluntary guidelines developed collaboratively among provincial, territorial, and federal jurisdictions for the protection of freshwater and marine life[56]; [56] https://www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/index.html	Section 7.2
	▪ Describe any changes to groundwater quality that could affect surface water quality;	Section 8.3
	▪ Provide an assessment for off-site migration pathways for impacted groundwater, and an analysis of contaminant attenuation capacities within the hydrogeological units of the project study area; and	Section 8.3
	▪ Describe groundwater and surface water monitoring programs during the construction, operation and decommissioning and abandonment.	Section 7.10 Section 8.2 Section 8.10 Section 7.5 in Appendix N

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	If the proponent undertakes quarrying activities to extract aggregate material that may results in effects on groundwater and surface water levels (i.e., quarrying below the water table), the Impact Statement must:	
	▪ Present an integrated site water balance model incorporating surface and groundwater fluxes for the construction, operation and decommissioning of large quarrying sites	Section 8.3.5.2
	▪ Describe the risk to the receiving environment related to effects to the quantity and quality of all effluent streams released from the site, including surface runoff from aggregate and overburden stockpiles, and dewatering discharge;	Section 7.2 Section 7.3
	▪ Describe spatial and temporal (i.e., all project life cycle) changes to groundwater quality at potential receptor locations (e.g., existing or future drinking water wells and spring water sources), including traditional land users, due to effluents from the Project including changes to physicochemical parameters (temperature, pH, salinity, dissolved oxygen, dissolved organic carbon), chemical constituents (major and minor ions, trace metals, nutrients, organic compounds);	Section 8.1.5
	▪ Describe spatial and temporal (i.e., over project life cycle) changes to surface water quality at potential receptor locations, including traditional land users, due to effluents and atmospheric deposition from the Project including changes to physicochemical parameters (temperature, pH, salinity, dissolved oxygen, turbidity, dissolved organic carbon, total suspended solids), chemical constituents (major and minor ions, trace metals, nutrients, organic compounds);	Section 7.1.5
	▪ With respect to potential effects on water quality resulting from acid rock drainage and/or metal leaching, the Impact Statement must: provide estimates of the potential for aggregate extraction activities (i.e., eskers and quarries) and rock exposed in permanent rock cuts to be sources of acid rock drainage or metal leaching;	Section 8.3.4
	▪ Describe the methods used to predict acid rock drainage and/or metal leaching for construction materials, including sample collection and laboratory testing;	Section 8
	▪ Identify potential risks to surface and seepage water quality from the aggregate and overburden stockpiles and project infrastructure during construction, and operation, decommissioning and abandonment;	Section 8.3
	▪ Provide aggregate sources, volumes and tonnage, and extraction construction methods;	Section 8.3
	▪ Provide an acid rock drainage assessment and mitigation plan that describes the confirmatory monitoring of construction materials and potential mitigation strategies to prevent or control acid rock drainage and metal leaching during construction, operation, decommissioning and abandonment; and	Section 8.10
	▪ Describe contingency plans, monitoring during operation, decommissioning and abandonment, and maintenance plans.	Section 4 Section 23 Section 22 Appendix E
14.3	**Changes to Riparian, Wetland and Terrestrial Environments** The Impact Statement must:	
	▪ Provide an overall description of changes related to landscape disturbance including fragmentation of habitats and project effects on areas of ground instability;	Section 11.2.2
	▪ Describe any hydrological or drainage changes that may alter moisture regimes and how that may affect vegetation and wetland function;	Section 11.3.3
	▪ Describe how hydrological or drainage changes may disturb soils, wetlands, peatlands or muskeg and result in the release of mercury or methylmercury from disturbed soils, which may affect water and groundwater quality, fish, wildlife and human health;	Section 7.3 Section 7.4
	▪ Describe any changes to permafrost conditions as a result of the Project;	Section 6.2.2.4 Appendix D-1
	▪ Describe any changes to eskers and similar geological features as a result of the Project;	Section 6.2.2.6 Appendix D-1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe any contaminants of concern (e.g., arsenic, chromium, mercury) potentially associated with the Project (including from spills or accidental discharges) that may affect soil, sediment, wetlands, and surface and ground water (including substances used during summer and winter maintenance activities);	Section 11.4 Section 23
	▪ Describe direct, incidental and cumulative predicted positive and/or adverse effects to riparian, wetland (including separate description relevant to peatlands) and terrestrial biodiversity metrics, effects of fragmentation, changes to regional biodiversity that could be caused by all project activities, including but not limited to effects to wetland ecological functions, including effects that may alter the wetland's capacity to perform hydrological, biogeochemical cycling, habitat, and climate functions.	Section 11.4
	▪ Describe the methodology used to identify effects;	Section 11.2.1
	▪ Describe the historical land use and the potential for contamination of soils and sediments and potential for loss of soil fertility. Describe any known or suspected soil contamination within the study area that could be re-suspended, released or otherwise disturbed as a result of the Project;	Section 11.4
	▪ Describe any changes in risk to forest fires that may result from the Project;	Section 11.4
	▪ Describe any changes to plant species of cultural importance	Section 11.3
	▪ Describe the vegetation standards and controls to be implemented while constructing and operating the Project. Describe any integrated vegetation management programs, including:	
	▫ the criteria and circumstances for applying chemical, biological or mechanical control methods;	Section 11.4 Appendix E
	▫ potential effects on country foods, animal browse, surface waters, wetlands and soil and proposed mitigation measures to herbicide application;	
	▫ the methods to be used to prevent spread of non-native, invasive species such as	
	▫ *Phragmites australis* (European Common Reed); and	
	▫ the selection of plant species to be kept and planted to promote naturally low- growing plant communities.	
	▪ Describe any revegetation procedures to be implemented as part of the Project, including:	
	▫ revegetation techniques and the locations where they would be implemented;	Section 11
	▫ seed mixes to be used, application rates and location of application;	
	▫ fertilizers to be used, application rates and locations, and criteria for determining these specifications; and	
	▫ contingency planting and seeding plans that include a description of species to be replanted, the locations for replanting and criteria for determining these specifications.	
	▪ Describe any positive changes (e.g., from offsets that result in re-vegetation, new wetlands etc.).	Section 11.3
15	**Effects to Valued Components – Environment**	
	Within the context of the predicted changes to the physical environment, the proponent must assess the effects of the project on environmental valued components. Interconnections between environmental valued components and social, health and economic valued components and interactions between effects must also be described.	Sections 6 to 20 (refer to Identification of Project Interactions)
15.1	**Fish and Fish Habitat** The Impact Statement must:	
	▪ Describe any direct, incidental or cumulative predicted positive and/or adverse effects to fish (all developmental stages) and fish habitat as defined in subsection 2(1) of the *Fisheries Act*, including the calculations of any potential habitat loss (temporary or permanent) including spawning grounds, nursery, rearing, food supply, and migration areas, or death of fish. The assessment must include a consideration of:	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ the geomorphological changes and their effects to hydrodynamic conditions and fish habitats (e.g., modification of substrates, dynamic imbalance, silting of spawning beds);	Section 10.3 Section 10.7 Appendix F
	▫ the modifications of hydrological, and hydrometric conditions on fish habitat, critical habitat for aquatic species at risk, and on the fish species' life cycle activities (e.g., reproduction, fry-rearing, migration);	
	▫ potential effects to riparian areas that could affect aquatic biological resources and productivity taking into account any anticipated modifications to fish habitat (e.g., structure, cover);	
	▫ changes to water quality both at the discharge point and in the receiving environment;	
	▫ changes to water quality due to runoff from any temporary and permanent project components;	
	▫ describe effects to fish biodiversity considering identified biodiversity metrics;	
	▫ any potential imbalances in the food web and trophic levels in relation to baseline conditions;	
	▫ effects to the primary and secondary productivity of water bodies and how project- related effects may affect fish food sources;	
	▫ potential for direct effects of contamination downstream of the Project on fish and bioaccumulation of contaminants (e.g., selenium, mercury, chromium, arsenic) in fish that may be consumed by Indigenous groups;	
	▫ potential direct and incidental effects on fish behaviour, distribution, abundance, migration patterns; and	
	▫ potential losses of individuals and relationship to population density and the resiliency of a population.	
	▪ Describe the effects of changes to the aquatic environment on fish and fish habitat, including:	
	▫ the anticipated changes in the composition and characteristics of the populations of various fish species, especially those of cultural significance to Indigenous communities with traditional land use practices in the area and provincially or federally listed aquatic species at risk;	Section 10.3
	▫ describe any modifications in migration, local movements (e.g., upstream and downstream migration, and lateral movements) or stranding of fish, following the construction, operation or closure of works (e.g., physical, chemical and hydraulic barriers to fish passage);	
	▫ identify any reduction in fish populations as a result of potential overfishing due to increased access to the project area;	
	▫ contaminant levels in harvested species and their prey; and	
	▫ describe any modifications and use of habitats, including the ability to access the habitat.	
	▪ Include a discussion of how project construction timing correlates to key fisheries timing windows for freshwater and anadromous/catadromous species, and any potential effects resulting from overlapping periods;	Section 10.4
	▪ A discussion of how vibration caused by project activities (e.g., blasting) may affect fish habitat and behaviour, such as spawning or migrations;	Section 10.4
	▪ Describe potential effects from impingement and entrainment of fish and other aquatic biota through water withdrawal;	Section 10.3 Section 10.4
	▪ Describe any need for a Fisheries Act authorization and/or a Species at Risk Act permit and describe any consideration of Department of Fisheries and Oceans guidance documents;	Section 10.4
	▪ For linear projects, describe and justify watercourse-crossing techniques to be used and the criteria for determining the techniques proposed for each watercourse-crossing;	Section 10.4
	▪ Include a risk assessment of the potential introduction and intrusion of aquatic invasive species;	Section 10.4
	▪ Describe effects from changes in light level;	Section 10.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe any positive changes, such as habitat creation;	Section 10.4
	▪ Describe the anticipated changes in the composition and characteristics of the populations of fish, following modifications to the aquatic environment, including but not limited to:	
	▫ disruption of life stages or habitat with regard to their productivity, life cycles, migration, or local movements, including a consideration of spawning, rearing, feeding, and overwintering;	Section 10.3 Section 10.4
	▫ disruption of feeding activities of fish;	
	▫ distribution and abundance of fish;	
	▫ contaminant levels in harvested species and their prey;	
	▫ a consideration of a change in: behavior, displacement, access to habitat, habitat structure, species composition, ecosystem structure and function and habitat quality; and	
	▫ freshwater animal health and condition.	
	▪ Describe any effects to other aquatic organisms; and	
	▪ Describe any changes to aquatic plants, including all benthic and detached algae and phytoplankton.	
	Additional guidance is identified in Section 8.8 and in Appendix 1 of the TISG.	
15.2	**Birds, Migratory Birds and their Habitat** The Impact Statement must:	
	▪ Describe direct, incidental and cumulative predicted positive and/or adverse effects to migratory birds and non-migratory birds, including population level effects that could be caused by all project activities, including but not limited to:	Sections 12.3.7, 12.3.8, 12.3.9, 12.3.10, 12.3.11
	▫ site preparation/vegetation removal;	Sections 12.3.7.1, 12.3.7.3, 12.3.9.1, 12.3.8.4,
	▫ air emissions and dust;	Sections 12.3.7.2, 12.3.8.2, 12.3.9.2, 12.3.10.2, 12.3.11.2
	▫ deposit of harmful substances in waters that are frequented by migratory birds;	Sections 12.3.8.2, 12.3.9.2
	▫ changes to the aquatic flow regime and sediment load;	Sections 12.3.8.1, 12.3.9.1, 12.3.11.1
	▫ sensory disturbance;	Sections 12.3.7.2, 12.3.8.2, 12.3.9.2, 12.3.10.2, 12.3.11.2
	▫ increased predation opportunities;	Sections 12.3.7.4, 12.3.8.4, 12.3.9.4, 12.3.10.4, 12.3.11.4
	▫ disruption of wildlife movement corridors;	Sections 12.3.7.3, 12.3.8.3, 12.3.9.3, 12.3.10.3. 12.3.11.3
	▫ increased poaching opportunities; and	Sections 12.3.7.4, 12.3.8.4, 12.3.9.4, 12.3.10.4, 12.3.11.4
	▫ site reclamation.	Appendix E
	▪ Consult *A Framework for the Scientific Assessment of Potential Project Impacts on Birds* Appendix 2 and 3 for overview of potential impacts to birds from road projects[57]; [57] http://publications.gc.ca/site/eng/367511/publication.html	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ analyze predicted effects for all birds, each valued component, and for Bird Conservation Region Priority Species and include relevant effects from Appendix 2 and 3. Include separate analyses for each project activity, component, and phase. Incorporate sources of error for all analyses to insure final impacts estimates show the best available estimate of precision;	Sections 12.1.4, 12.3.7, 12.3.8, 12.3.9, 12.3.10
	▫ non-linear, indirect and synergistic responses to the project should be explicitly explored where reasonable;	Sections 12.3, 12.3.1
	▫ any assumption of displacement should be justified with scientific references and surveys should provide evidence that there is available habitat to accommodate displacement under a range of population scenarios. For example, it should be clear that a growing population will not be limited by the habitat loss along the project study area.	Section 12.3.2.1
	▪ Consult the maps, data, and models developed through the Boreal Avian Modelling Project, and describe how these materials have been incorporated where relevant (https://borealbirds.ualberta.ca/);	Section 13.3.6.1
	▪ Describe short term and long term changes to habitats and food sources of migratory and non-migratory birds (types of cover, ecological unit of the area in terms of quality, quantity, distribution and functions), with a distinction made between these two birds categories, including losses, structural changes and fragmentation of riparian habitat (aquatic grass beds, intertidal marshes), terrestrial environments (e.g., uplands, grasslands, forested, old growth, post fire) and wetlands frequented by birds. Describe changes in terms of the health, integrity, and availability of habitats. Important habitats to consider include: eskers, (and similar upland features), forest, riparian, bog/fen/peatlands, other wetlands, and open water;	Sections 12.3.7.2, 12.3.8.2, 12.3.9.2, 12.3.10.2, 12.3.11.2
	▪ Describe the changes to the bird-habitat relationships; the change in biodiversity, abundance, and density of the avian community that utilise the various habitat types or ecosystems;	Sections 12.3.7.2, 12.3.8.2, 12.3.9.2, 12.3.10.2, 12.3.11.2, 13.3.6.2, 13.3.7.2, 13.3.8.2, 13.3.9.2, 13.3.10.2, 13.3.11.2
	▪ Account for changes in detection pre- and post-project construction. For instance, roads allow for greater detection distances and therefore any estimates of abundance or presence need to account for differential detectability[58]; [58] www.ace-eco.org/vol12/iss1/art11/ACE-ECO-2017-997.pdf	
	▪ Describe the effects caused by the new habitat types created in the project area by clearing vegetation. The new habitats created may attract migratory birds, which were not present before (such as the Eastern Whip-poor-will or the Common Nighthawk). Describe how these species at risk may be impacted by the project.	Sections 12.3.7.3, 12.3.8.2, 12.3.10.2
	▪ Describe the potential direct, incidental and cumulative adverse effects of the Project on migratory bird species (such as SARA-listed Yellow-Rail) who inhabit the project area during breeding season as well as during migration (as staging and stopover sites);	Sections 13.3.6, 13.3.7, 13.3.8, 13.3.9, 13.3.10, 13.3.11
	▪ Describe the change in mortality risk, including as a result of collision of migratory birds with any project infrastructure, vessels and vehicles;	Sections 12.3.7.4, 12.3.8.4, 12.3.9.4, 12.3.10.4, 12.3.11.4, 13.3.6.4, 13.3.7.4, 13.3.8.4, 13.3.9.4, 13.3.10.4, 13.3.11.4
	▪ Ensure surveys cover temporal window that incorporates a variety of road usage by both diurnal and nocturnal species;	Sections 13.1.2.2.9, 13.2.1.2.1
	▪ Account for indirect effects such as the increased movement of predators in the predictions of mortality effects;	Sections 12.3.7.4, 12.3.8.4, 12.3.9.4, 12.3.10.4, 12.3.11.4, 13.3.6.4, 13.3.7.4, 13.3.8.4, 13.3.9.4, 13.3.10.4, 13.3.11.4
	▪ Describe the incidental effects caused by increased disturbance (e.g., sound, artificial light, presence of workers), relative abundance movements, considering the critical periods for the birds, including but not limited to breeding, migration and overwintering; and	Sections 13.3.6.2, 13.3.7.2,
	▪ Support any assumption of temporary displacement during construction and operation of the Project through evidence or through study and monitoring within the project study area.	Section 13.3.10.3
	Additional guidance is identified in Section 8.9 and in Appendix 1 of the TISG.	-

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
15.3	**Terrestrial Wildlife and their Habitat** The Impact Statement must:	
	▪ Describe the potential direct, incidental and cumulative adverse effects to other wildlife and wildlife habitat, including population level effects that could be caused by all project activities, including but not limited to: project noise and sensory disturbances (including from increased air traffic to and from the Webequie airport), habitat alteration, air emissions and dust, increased predation, increased potential for spread of disease, invasive species introductions, poaching opportunities, any linear access corridors (roads, rights of way) particularly in the vicinity of wetland (including peatlands), lake and riparian habitats and on migratory corridors;	Sections 12.3.2, 12.3.3, 12.3.4, 12.3.5, 12.3.6
	▪ Describe effects to terrestrial wildlife biodiversity considering biodiversity metrics, effects of habitat fragmentation, changes to regional biodiversity;	Sections 12.3.2, 12.3.3, 12.3.4, 12.3.5, 12.3.6
	▪ Describe the potential adverse effects of the Project on species noted as important to Indigenous groups and local communities and their habitat that are not currently listed under the Species at Risk Act or provincial statutes;	Sections 12.1.2, 12.3.9, 12.3.10
	▪ Provide an evaluation of the effects of any new road access or rights of way on wildlife mortality risk and movement patterns;	Section 12.3 Section 13.3
	▪ Describe the potential adverse effects of the Project on wildlife as a result of poaching;	Sections 12.3.9.4, 12.3.10.4, 12.6.7, 12.6.9, 12.7.1.4, 12.7.8.4, 12.8.1.4, 12.8.8.4
	▪ Describe changes to key habitat, including eskers and similar geologic features, wetlands and peatlands, for species important to current use of lands and resources for traditional purposes;	Section 12.3.2
	▪ Describe changes to insects, pollinating species in particular;	Sections 12.3.6, 12.3.7.2
	▪ Describe changes to vegetation species important to Indigenous peoples; and	Section 11.2
	▪ In addition to direction from Environment and Climate Change Canada via the Agency, the Ontario Ministry of Environment, Conservation and Parks and the Ministry of Natural Resources and Forestry should be considered a source of information on appropriate methodologies to predict effects to wildlife.	Sections 12.2.1, 12.3.6, 12.3.12
15.4	**Species at Risk and their Habitat Science- Based Evidence from the Relevant Jurisdiction that is Consistent with the Recovery Strategy** The Impact Statement must:	
	▪ Describe the potential direct, incidental and cumulative adverse effects of the project on species at risk listed under Schedule 1 of the *Species at Risk Act* and, where applicable, its critical habitat (including its extent, availability and presence of biophysical attributes);	Sections 13.3 and 13.7
	▪ Analyse predicted effects for each species at risk. To fully understand the effects and/or benefits of one alternative versus another, all relevant metrics and evaluators for species at risk should be considered;	Section 13.3
	▪ Include separate analyses for each project activity, component, and phase;	Sections 13.3.3 to 13.3.12
	▪ Consider potential effects to species at risk from bioaccumulation and biomagnification of contaminants of dust and other pollutants resulting from the project; and	Section 13.3.11
	▪ Conduct post-construction surveys to verify predicted effects.	Section 13.10.3
	In relation to describing effects on bats, the Impact Statement must:	
	▪ Take into account any effects to foraging habitats as well as hibernacula, roosts and travel corridors when assessing effects to local and regional populations; and	Section 13.3.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Identify potential roosts, hibernacula, foraging habitat and travel corridors in the local area and determine whether the Project will impact these habitats or their functions as bat habitat. Where artificial roost structures (i.e., buildings) are rare in the landscape, particular attention should be paid to identifying natural roost structures;	Sections 13.1.2.2.3, 13.3.8.1, 13.3.8.2
	In relation to describing effects on caribou, the Impact Statement must:	
	▪ Provide an assessment of the potential adverse effects on boreal caribou habitat (e.g., at the range and sub-range scales) considering the direction provided in the RMP and GHD (see section 8.11) and informed by NHIC information layers and the General Habitat Description Mapping Product (available through the Ontario Ministry of Environment, Conservation and Parks);	Sections 13.1.2.2.1, 13.3.3.1, 13.3.3.2
	▪ Assess the effects of all linear disturbances (e.g., new road access or rights of way) on caribou, including movements between seasonal habitats to account for functional habitat loss and effects of increased predation.[59]; [59] https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/ri_boreal_caribou_science_0811_eng.pdf	Sections 13.3.3.1, 13.3.3.2, 13.3.3.3, 13.3.3.4
	▫ use population-level modeling to assess the effects of proposed disturbance on caribou at the scale of federal range boundaries and provincial range boundaries. Increases in predation caused mortality rates need to be considered as do the anticipated exacerbating effects of climate change;	Section 13.2.1.1.3
	▫ with respect to effects on undisturbed habitat at the scale of the range:	
	– provide an account (and GIS file if available) of added project disturbance using a 500-metre buffer, using the following formula: (Project footprint + 500- metre buffer) - overlapping area(s) already considered disturbed habitat (see glossary in the federal recovery strategy); and	13.6.1 (Figure is not provided)
	– determine whether the Project is expected to compromise the ability of ranges to be maintained at the disturbance management threshold and provide a rationale for the conclusion[60]. [60] https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs_caribou_boreal_caribou_0912_e1.pdf	Section 13.1.2.2.1
	▪ With respect to effects on biophysical attributes as defined in Appendix H of the boreal caribou Recovery Strategy: determine whether the Project is expected to remove or alter biophysical attributes necessary for boreal caribou recovery or survival and provide a rationale for the conclusion (provide GIS file if available);	Section 13.2.1.1.3
	▪ With respect to effects on connectivity:	
	▫ determine whether the Project is expected to result in a reduction of connectivity within or between the ranges and provide a rationale for the conclusion;	Section 13.3.3.3
	▫ evaluate habitat and range connectivity at the local, regional and range scales using quantitative methods (e.g., habitat suitability analysis etc.); and	Section 13.3.3
	▫ in addition, where telemetry data is available, evaluate movements of collared individuals using quantitative methods (e.g., step analysis), to determine existing movement corridors, and how these may be affected by project development.	Section 13.2.1
	▪ With respect to the effects of predation: determine whether the Project is expected to result in an increase of predator and/or alternate prey access to undisturbed areas and provide a rationale for the conclusion;	Section 13.3.3.4
	▪ With respect to effects on individuals and population condition at the range scale:	
	▫ provide best available information from the Ontario Ministry of the Environment, Conservation and Parks concerning baseline range population size and trend;	
	▫ provide an assessment of the potential adverse effects of the Project on the population condition of the range (i.e., size and trend) at both the provincial range scale and the federal range scale; and	Section 13.3.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ provide an assessment of the potential adverse effects on boreal caribou individuals (e.g., sensory disturbance, mortality, pollution) including legal harvest from indigenous groups.	Section 13.3.3
	▪ Provide an evaluation of the following:	
	▫ caribou (Habitat Protection) – Range Condition;	Section 13.3.3.2.1
	▫ caribou (Species Protection) – Population Size Estimates at the Range Level (e.g., minimum animal count based on available information);	
	▫ caribou (Species Protection) – Population Trend Estimates at the Range Level;	
	▫ caribou (Habitat Protection) – Cumulative Disturbance at Range Level;	Section 13.3.3.5
	– quantify additional disturbance being added to the range (footprint and footprint + 500 metre buffer) ;	Section 13.3.3.5
	– alignment with existing disturbance; and	
	– length of new linear disturbances.	Section 13.3.3.3.1
	▫ caribou (Habitat Protection) – Habitat Amount and Arrangement;	Sections 13.3.3.1 and 13.3.3.2
	▫ caribou (Habitat Protection) – Categorized Habitat at the Sub-range Level:	Sections 13.3.3.3.1 and 13.3.3.2
	– category 1: High Use Area – Nursery Areas Habitat potentially impacted:	
	• number of Nursery Areas within the Range;	Section 13.3.3.2
	• number of Nursery Areas potentially impacted by the Project (e.g., how many intersect with project footprint, are within 2 kilometres, within 10 kilometres);	
	• relevant information on that habitat, such as average age of forest, condition of forest, etc., for each Nursery Area potentially impacted by the Project;	
	• area (ha) of each Nursery Area potentially being impacted; and	
	• area (ha) of each Nursery Area removed by Project.	
	– Category 1: High Use Area – Winter Use Areas potentially impacted:	
	• number of Winter Use Areas within the Range;	Section 13.3.3.2
	• number of Winter Use Areas potentially impacted by the Project (e.g., how many intersect with project footprint, are within 2 kilometres, within 10 kilometres) ;	
	• relevant information on that habitat, such as average age of forest, condition of forest, etc. for each Winter Use Area potentially impacted by the Project;	
	• area (ha) of each Winter Use Area potentially being impacted; and	
	• area (ha) of each Winter Use Area removed by Project.	
	– Category 1: High Use Area – Travel Corridors potentially impacted:	
	• number of Travel Corridors within the Range;	Section 13.3.3.3 Section 13.3.3.3.1
	• number of Travel Corridors potentially impacted by the Project (e.g., how many intersect with project footprint, are within 2 kilometres, within 10 kilometres);	
	• relevant information on that habitat, such as average age of forest, condition of forest, etc. for each Travel Corridor potentially impacted by the Project;	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	• area (ha) of each Travel Corridor potentially being impacted; and	
	• area (ha) of each Travel Corridor removed by Project.	
	– Category 2: Seasonal Ranges impacted:	
	• Area (ha) of Seasonal Ranges potentially being impacted;	Section 13.3.3.1.1
	• relevant information on that habitat, such as biophysical attributes for Seasonal Ranges potentially impacted by the Project; and	
	• Area (ha) of Seasonal Range removed by Project.	
	– Category 3: Remaining Areas in the Range impacted:	
	• remaining Areas (ha) in the Ranges potentially being impacted;	Sections 13.5.2.1.1 - 13.3.3.1.1 - 13.3.3.1.2
	• relevant information on that habitat, such as biophysical attributes for remaining Areas in the Range potentially impacted by the Project; and	
	• remaining Areas (ha) in the Range removed by Project.	
	– caribou (Species Protection) – Incidental mortality due to anthropogenic effects (e.g., vehicular collisions, increased hunting pressure);	Section 13.3.3.4
	– caribou (Species Protection) – Indirect mortality due to increase in alternate prey sources (moose and deer) leading to increased predation (wolves, bears, etc.) and increased potential for spread of disease (e.g., brainworm);	Section 13.3.3.4
	– caribou (Species Protection) – Indirect effects due to sensory disturbance (e.g., light, sound, vibration, olfactory) within 10 kilometres of the Project;	Section 13.3.3.2
	▪ The sources of information that should be consulted are:	
	▫ documents provided by Ontario:	Section 13.12
	– IAP, CCP, RMP, and GHD (defined in section 8.11);	Section 13.12
	– draft Selected Wildlife and Habitat Features: Inventory Manual for use in Forest Management Planning v1.0 (1997);	Section 13.12
	▫ Indigenous knowledge; and	Sections 13.1.2 and 13.1.3
	▫ science-based evidence from the relevant jurisdiction that is consistent with the Recovery Strategy, including spatially explicit Population Viability Analysis.	Section 13.2.1
	▪ Clearings created for the Project may create new habitat types thereby attracting Species at Risk which were not present before (such as the Eastern Whip-poor-will or the Common Nighthawk). Describe how new habitat types will impact species at risk in the project area;	Section 13.3.3.3.2 Section 13.3.4.3 Section 13.3.5.3
	▪ Describe the effects of construction pits and quarries on or near esker deposits on species at risk;	Section 13.3
	▪ Describe the potential adverse effects of the Project on species protected by provincial statutes and assessed by the COSEWIC as extirpated, endangered, threatened or of special concern (flora and fauna) and their habitat that are not currently listed under the *Species at Risk Act*;	Section 13.2.2 Sections 13.3.3 to 13.3.11
	▪ Identify critical timing windows (e.g., denning, rutting, spawning, calving, breeding, roosting), setback distances, or other restrictions related to these species;	Sections 13.4.3 to 13.4.7
	▪ Identify provincial, territorial or federal permits or authorizations that may be required in relation to the species at risk;	Section 13.1.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Provide survey results and detailed mapping of each species at risk and their habitat, including important habitat features, for all federal lands;	Section 13.2
	▪ Clearly identify the locations of federal lands/non-federal lands within the study area and differentiate between these land tenures in the presentation of information regarding all species at risk. For example, total habitat disturbance for boreal caribou should be presented at the range scale, but it should also be presented in a way that clearly indicates habitat disturbance specifically within federal lands;	Section 13.2
	▪ Describe all reasonable alternatives to the Project that would avoid the potential effects on species and their habitat, with particular attention to critical habitat, and important habitats such as upland habitat which is used as movement corridors by caribou, breeding areas for birds, and which contains roosting habitat for bats;	Section 13.9
	▪ Describe all feasible measures that will be taken to avoid or lessen the impact of the Project on the species and its critical habitat;	Section 13.4
	▪ Demonstrate that avoidance and minimization measures will be applied for species at risk. Recovery Strategies will provide information such as Population and Distribution Objectives, and Strategic Direction for Recovery;	Section 13.4
	▪ Describe the residual effects that are likely to result from the project after avoidance and minimization measures have been applied, including the extent, duration and magnitude of the effects on:	
	▫ the number of individuals killed, harmed, harassed; and	Section 13 Section 14
	▫ the number of residences damaged or destroyed.	
	▪ Describe the area, biophysical attributes and location of habitat including critical habitat affected (e.g., destroyed, permanently altered, disrupted); describe all feasible measures that would be taken to eliminate the effects of the work or activity on species and their habitats, including critical habitat; and	Section 13.3 Section 13.4
	▪ Provide an account of how the project and mitigation measures are consistent with the recovery strategy, action plan, or management plan for the species.	Sections 13.1.2.2.2 to 13.6.1
	Additional guidance is identified in Section 8.11 and in Appendix 1 of the TISG.	
15.5	**Climate Change** The Impact Statement must:	
	▪ Provide a description of each of the Project's main sources of GHG emissions;	Section 9.3.2
	▪ Provide the estimated annual GHG emissions from each source, including calculation methods, assumptions and related parameters that would enable calculations to be reproduced;	Section 9.3.2
	▪ Provide an estimate of yearly net GHG emissions for each year of the project lifetime, including an uncertainty assessment, as per section 3 of the draft Strategic Assessment of Climate Change;	Section 9.3.2
	▪ Provide a description of large sources of GHG emissions that may be the consequence of accidents or malfunctions;	Section 23.4.3 Section 23.5.2
	▪ Provide a qualitative description of the Project's positive or negative effects on carbon sinks, including from the removal and alteration of wetlands;	
	▪ Describe how the Project may contribute to Canada's efforts to reduce GHG emissions, if applicable (e.g., the Impact Statement could explain how the Project would result in emission reductions in Canada by avoiding emissions from another source);	Section 9.9
	▪ Describe how the Project could impact global GHG emissions, including if the Project is expected to displace emissions internationally. The Impact Statement should describe how the Project is likely to result in global emission reductions. For example, a Project that enables the displacement of high-emitting energy abroad with lower emitting energy produced in Canada could be considered as having a positive impact.	Sections 9.3.2 - 9.5.2.2 - Sections 3 and 4 of Appendix H

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	Additional guidance related to GHG emissions and climate change is included in the draft Strategic Assessment of Climate Change[61] developed by Environment and Climate Change Canada and in Appendix 1 of the TISG. [61] https://www.strategicassessmentclimatechange.ca/	Appendix H
16	**Effects to Valued Components – Human health**	
	Social, economic, health, and environmental effects are interconnected and therefore, many human health effects will have close linkages to social and economic effects. Change in any one of these domains will often lead to changes in the others. Within the context of the predicted changes to the biophysical environment, social and economic conditions resulting from the Project, the proponent must assess the adverse and positive effects of the Project on human health, particularly regarding the effects of the higher-level health determinants on well-being. The assessment must consistently take into account real and perceived risk and carry out baseline studies using recognized methodological best practices and as reflected in these guidelines, to determine perceived risk.	Sections 17.1 to 17.3
	Interconnections between human health and other valued components and interactions between effects must be described, particularly where proponents suggest a potential impact occurring indirectly as the result of the proposed Project. Given that changes to any given health determinant may result in an impact to one or more health outcomes, it is important to include interactions within and across the higher-level health determinants (i.e., Level 2, pertaining to material circumstances/resources and psychosocial factors, and Level 3, pertaining to structural factors and equity factors) in order to identify the pathways of health effects that are most likely to be affected by project-related changes to the determinant(s) of health.	Section 17.1.4
	Valued components that require assessment are listed below. Indicators should be developed by the proponent using best practice, Agency guidance, and through engagement with Indigenous groups and the public. Rationale for the indicators chosen should be provided. If, after engaging with Indigenous groups and the public, the proponent determines that further valued components require assessment, it should do so with a rationale for the selections, and an explanation of how engagement informed them. If, after engaging with communities and conducting further analysis, the proponent determines that the information and valued components listed below could be more meaningfully organized and presented in an alternate way, it may do so with an explanation and rationale for these changes.	Section 17.1.4.2
	The proponent must describe how community and Indigenous knowledge was used to collect baseline data and assess health effects and disaggregate the source of community or Indigenous knowledge, as well as social, economic, and health data, by representation by sex, age and other community- relevant identity factors to support identification of disproportionate effects through the application of GBA+.	Section 17.1.2 Section 17.1.3
	In assessing effects to valued components listed below, the analysis should discuss circumstances in a community where diverse subgroups, because of their particular circumstances, could experience adverse effects from the Project more severely than others, or be excluded from potential benefits, including Indigenous peoples or other community relevant subgroups (e.g., women, youth, elders).	Section 17.2.2.13
	The assessment must illustrate an understanding of linkages and effect pathways, so that when a change in one domain is predicted, there is an understanding of what other effects or consequences may be felt across the other domains. Applying a “determinants of health approach” in the assessment of human health effects will support the identification of these linkages, as well as of disproportionate effects across subgroups. In addition to the references listed in sections 7.2 and 9, the following sources offer examples of data tools or data sources that include indicators potentially relevant to reporting on the determinants of health:	Section 17.3.1
	▪ PHAC, Health Inequalities Data Tool: (https://health-infobase.canada.ca/health- inequalities/indicate);	Section 17.2.1
	▪ Statistics Canada: (https://www150.statcan.gc.ca/n1/daily-quotidien/160412/dq160412a- eng.htm);	
	▪ Canadian Institute for Health Information (CIHI): (http://www.cihiconferences.ca/indicators/epub/tables_e.html#comm_health);	
	▪ First Nations Information Governance Centre: (https://fnigc.ca/rhs3report);	
	▪ Positive Mental Health Indicators Framework (PHAC): (https://health- infobase.canada.ca/positive-mental-health/); and	
	▪ Past health impact assessments (https://www.pewtrusts.org/en/projects/health-impact- project).	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	A detailed health impact assessment inclusive of other reasonably foreseeable future projects would be appropriate to capture potential positive and adverse effects on social factors and economic factors (and where applicable cultural factors) in addition to the biophysical environmental factors. A health impact assessment may be able to assess the positive and negative consequences (i.e., differential) of effects on the environment and human health of those Indigenous groups whose territories are lost or removed along the road alignment. Best practices in health impact assessment methods, which may include, for example, the following references:	
	▪ Minimum Elements and Practice Standards for Health Impact Assessment. Bhatia R, Farhang L, Heller J, Lee M, Orenstein M, Richardson M and Wernham A.[62]; [62] https://hiasociety.org/resources/Documents/HIA-Practice-Standards-September-2014.pdf	Section 17.7
	▪ Health Impact Assessment of Transportation and Land Use Planning Activities Guidebook and Toolkit, Metro Vancouver[63]; [63] https://planh.ca/node/502	
	▪ National Collaborating Centre for Healthy Public Policy's website on health impact assessment[64]; and [64] http://www.ncchpp.ca/54/Health_Impact_Assessment.ccnpps	
	▪ Health Equity Impact Assessment toolkits, to assist with consideration of social determinants and gender-based factors[65]. [65] https://www.nccmt.ca/knowledge-repositories/search/146	
16.1	**Biophysical Determinants of Health**	
	With respect to biophysical determinants of health, the Impact Statement must:	
	▪ Provide an assessment of adverse and positive effects on human health in consideration of, but not limited to, potential changes in:	
	▫ air quality[66] [67]; [66] It is recommended to assess the cancer risks of human exposures to all potentially carcinogenic PAHs in mixture rather than a single surrogate substance. A mixture analysis (weighted approach) allows for determination of the cancer risks of PAHs based on benzo(a)pyrene [B(a)P] Total Potency Equivalents (TPE), or the sum of estimated cancer potency relative to B(a)P, in comparison to the appropriate health-based toxicological reference values (e.g., Health Canada's Inhalation Unit Risk and ambient air quality criteria (e.g., Ontario's Ambient Air Quality Criteria for annual and 24-hour exposures). [67] The human health risks associated with exposure to potential project-related diesel exhaust (DE) emissions should be addressed. DE is a complex mixture of gaseous and particulate compounds, including diesel particulate matter (DPM). It is recommended to follow one of the approaches below for a carcinogenic evaluation of DE: 1) Conduct a quantitative assessment of an incremental cancer risk associated with DE using the unit risk and inhalation slope factor available from the California Environmental Protection Agency (CalEPA) in combination with model estimates of exposure to DE. This approach provides insight as to the potential effects a specific project would have in relation to risk associated with the diesel emissions. Or; 2) Provide a robust qualitative discussion on the carcinogenic risk of DE associated with the project. The discussion should include the following elements to ensure transparency: i) identification of the main sources of DE for the project and of the relative importance of DE as a source of air pollution for the project; ii) recognition that DE has been declared a human carcinogen by international agencies including Health Canada, WHO (IARC), the US EPA and the California EPA; iii) the rationale for not undertaking a quantitative analysis of DE carcinogenic risk for the project.	Appendix P: Section 17.3.3.1
	▫ noise exposure;	Section 17.3.3.2
	▫ effects of vibration;	Section 17.3.3.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ current and future availability (including contamination/quality) of country foods (i.e., food that is trapped, fished, hunted, harvested or grown for subsistence, cultural or medicinal purposes); and	Section 17.3.3.8
	▫ current and future availability (including contamination/quality) of water for drinking, recreational and cultural uses.	Section 17.3.3.8
	▪ Identify predicted effects of the Project on the quality and quantity of ground or surface water used for domestic uses based on the most stringent guideline values of the following criteria; Canadian Drinking Water Quality Guidelines (CDWQG), Ontario Drinking Water Quality Standards (ODWQS), or Ontario Soil, Groundwater and Sediment Standards (SGSS);	Section 17.3.3.3
	▪ Describe and quantify the health risk from exposure to COPCs (e.g., arsenic, chromium, mercury) via consumption of country foods and differential risk for vulnerable subgroups;	Appendix P
	▪ Conduct a problem formulation exercise/preliminary model predictions to determine whether a Human Health Risk Assessment is required. The proponent must provide a rationale/explanation if problem formulation/preliminary model predictions indicate that a Human Health Risk Assessment is not warranted;	Appendix P
	▪ If a Human Health Risk Assessment is required, the assessment must identify all potential contaminant exposure pathways for contaminants of concern to adequately characterize potential biophysical risks to human health. A multimedia Human Health Risk Assessment may need to be considered and conducted for any contaminant of potential concern with an identified risk and multiple pathways;	Appendix P
	▪ Provide a detailed rationale/explanation if a determination is made that an assessment of any COPCs (e.g., arsenic, chromium, mercury) or exposure pathways should be excluded and/or screened out of the assessment and if the proponent decides to deviate from the suggested assessment approaches and methods or determines that such assessment is not warranted;	Not applicable
	▪ Describe and quantify the project-related activities, and provide an inventory of contaminants of potential concern and their sources, potential exposure pathways, adverse human health effects and the potential human receptors of these effects;	Appendix P
	▪ Describe nuisances and environmental, social and economic changes that could potentially be sources of adverse human health effects and the potential human receptors of these effects;	Section 17.3.3.
	▪ In situations where project related air, water or noise emissions meet local, provincial, territorial or federal guidelines, and yet public concerns were raised regarding human health effects, provide a description of the public concerns and how they were or are to be addressed;	Sections 17.1.2
	▪ Food security: describe effects to availability, use and consumption of country foods (traditional foods) and health impacts of this effect; and	Sections 17.3.3.8
	▪ Describe any project-related changes that may result in positive health effects.	Sections 17.2.2, 17.3.3.9 to 17.3.4.1, 17.5.2.2.7
16.2	**Social Determinants of Health**	
	With respect to Social Determinants of Health, the Impact Statement must	
	▪ Consider the social and economic valued components, and their respective indicators, as outlined in Sections 17 and 18, and their potential links to effects on health;	Sections 17.1.4 to 17.3.3
	▪ Consider adverse and positive effects on health (i.e., overall well-being) based on the social and economic valued components, and their respective indicators, as outlined in Sections 17 and 18. Specific priority indicators must be determined or validated by community members but may include, for example:	Sections 17.3 - 17.5.2
	▫ Level-1 health determinants related to behavioural factors (e.g., potential indicators related to diet/nutrition, alcohol and drug use);	Sections 17.1.4 to 17.3.4
	▫ Level-2 health determinants related to access to health, educational, social and other community services (e.g., potential indicator related to availability of health- care service providers) [see Section 17];	Section 17.1.4 Section 17.3.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ Level-2 health determinants related to material circumstances (e.g., potential indicators related to living conditions, food availability) [see Section 18];	Section 17.1.4.2 Section 17.1.6
	▫ Level-2 health determinants related to negative psychosocial factors for well- being, such as criminal activity as a result of an influx of outside workers (e.g., potential indicator related to sexual and gender-based violence) [see Section 17 for further details of content requirement]; and	Sections 17.1.4 to 17.3.3 Section 17.5.2.2.9
	▫ Level-3 health determinants related to structural and equity factors (e.g., potential indicators related to income, high school drop-out rates associated with seeking project-related employment) that may affect Level 2 determinants of health.	Sections 17.1.4 to 17.3.2
	▪ Describe how community and Indigenous knowledge was used in assessing human health effects;	Sections 17.1.3 to 17.1.4.1
	▪ Describe effects on the safety of women and girls from project activities including worker accommodation, and as a result of new roads in remote areas;	Section 17.3.3.10
	▪ Identify predicted visual or other aesthetic effects of the project on existing land use in the study area;	Section 17.3.3.4
	▪ Apply GBA+ across all relevant determinants of health (including access to health-and social services) and document how potential changes to these determinants may have differential effects on diverse subgroups, including Indigenous peoples or other community relevant subgroups (e.g., children, women, youth, elders) or may create or exacerbate existing health disparities identified in baseline assessment. Describe where biological factors (e.g., age and sex) can intersect with socioeconomic position and other health determinants to compound their vulnerability;	Section 17.2.2.13
	▪ Describe and quantify specific thresholds and document if different thresholds were considered for vulnerable populations, including by sex and age; provide rationale and justification if specific thresholds not used;	
	▪ Identify which health effects (negative or positive) are expected to be short-term or long- term, as well as which may be contingent upon future economic development projects (e.g., mining activity), or road connections (to provincial system); and	Section 17.5.2
	▪ Describe any positive health effects (e.g., resulting from improved economic opportunities, increased access to health-social services).	Section 17.5.2
	The variation of effects during different project phases and times of year should be described as well as potential project-related effects on the community health profile (e.g., changes to existing communal activities, support networks and cultural/spiritual practices that may contribute to community resilience.	Section 17.3
	Additional guidance from Health Canada regarding the assessment of human health impacts is identified in Appendix 1 of the TISG. It is requested that the proponent complete the checklists provided in the Health Canada guidance documents so as to assist Health Canada and other participants verify that the main components of the assessment are completed and to identify the locations of this information. Completing the checklists is especially useful when the analyses on a topic are found in multiple sections of the Impact Statement documentation. The proponent should provide a detailed rationale/explanation for any deviation from recommended assessment approaches/methods, including Health Canada's guidance, or when determining such assessment is not warranted. Additional guidance is identified in Section 9 and in Appendix 1 of the TISG.	Section 17.2.1
17	**Effects to Valued Components – Social**	
	Of note, many social effects will have close linkages to health and economic effects. Within the context of the predicted changes to the biophysical environment, health and economic conditions resulting from the project, the proponent must assess the effects of the project on social conditions. Interconnections between social valued components and other valued components and interactions between effects must be described. The assessment must illustrate an understanding of linkages and effect pathways, so that when a change in one domain (health, social and/or economic) is predicted, there is an understanding of what other effects or consequences may be felt across the other domains.	Section 14.1.6 Section 15.1.6

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	Valued components that require assessment are listed below. Indicators should be developed by the proponent using best practice, Agency guidance, and through engagement with Indigenous groups and the public. Rationale for the indicators chosen should be provided. If, after engaging with Indigenous groups and the public, the proponent determines that further valued components require assessment, it should do so with a rationale for the selections, and an explanation of how engagement informed them. If, after engaging with communities and conducting further analysis, the proponent determines that the information and valued components listed below could be more meaningfully organized and presented in an alternate way, it may do so with an explanation and rationale for these changes.	Section 14.1.4 Section 15.1.4
	The proponent must analyze the community and Indigenous knowledge across diverse subgroups where possible to identify differential effects highlighted by these groups including through the application of GBA+.	Section 14.2.1.3 Section 15.2.1.3
	In assessing effects to valued components listed below, the analysis should discuss circumstances in a community where diverse subgroups, because of their particular circumstances, could experience adverse effects from the Project more severely than others, or be excluded from potential benefits, including Indigenous peoples or other community relevant subgroups (e.g., women, youth, elders).	Sections 14.2 to 14.3 Sections 15.2 to 15.3
	As applicable to the assessment, the analysis should describe the goals of local or regional land use plans or local or regional development plans and the extent to which the Project is aligned with such plans to avoid or enhance social effects. For the valued components listed below, the effects assessment should explore and discuss opportunities by which benefits to local communities can be enhanced.	Section 14.2 Section 15.2 Section 16.2
17.1	**Services and Infrastructure** The Impact Statement must:	
	▪ Describe the predicted effects to services and infrastructure in the study area, including but not limited to the positive and adverse effects to:	
	▫ quality of road infrastructure;	Section 15.2.2.2.2
	▫ Ogoki post airport	Section 16.2.2
	▫ traffic safety;	Section 17.3.3.11 Section 14.3.7
	▫ educational facilities and childcare;	Section 14.2.2.3 Section 14.2.2.4
	▫ health care facilities;	Section 17.3.3.12
	▫ recreational and social services facilities;	Section 14.2.2.3
	▫ emergency services (e.g., police, ambulance, health care, fire fighting);	Section 17.1.4.2 Section 17.3.3.15
	▫ availability and use of fuel to generate power;	Section 14.2.2.2 Section 15.2.2.2
	▫ housing (ownership, cost, affordability, crowding);	Section 14.4.2 Section 17.3.3.5
	▫ communication services in the community (including telecommunications infrastructure);	Section 14.2.2.3 Section 14.3.3
	▫ transportation within and between communities, and in what forms (e.g., hitchhiking, shared rides, work buses);	Section 17.2.2.11 Section 17.3
	▫ supply of goods and services, including food;	Section 15.3.1
	▫ costs of goods and services, including food;	Section 15.2.2.2.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ existing businesses;	Section 15.4.3
	▫ community amenities (e.g., recreational spaces/services, green spaces); and	Section 14.2.2.3
	▫ community governance.	Section 17.3.2.4
	▪ Describe any need for government and/or proponent expenditures for new or expanded services, facilities or infrastructure, arising out of project-related effects.	Section 15.1.2 Section 15.1.4
17.2	**Land and Resource use and Recreation** The Impact Statement must:	
	▪ Describe predicted effects to recreation (e.g., hunting, fishing, hiking, wildlife viewing, aesthetic enjoyment) by the community and Indigenous groups, and youth within these communities, including effects to:	Section 16.3.3
	▫ access to the resources;	Section 16.3.3
	▫ quantity and quality of the resources; and	Section 16.3.3
	▫ overall experience when undertaking recreational activities, including noise, odours/air quality, and effects on visual landscapes.	Section 9.3 Section 16.3 Section 18.3
	▪ Describe effects to community well-being due to changes to viewscapes and soundscapes resulting from the Project;	Section 14.3.7 Section 18.3
	▪ Describe the potential interactions of the Project with local and regional land use and resource activities, including adverse and positive effects to:	
	▫ transportation, utilities and communication corridors (including community airports and winter roads);	Section 16.3.4
	▫ residential land use;	
	▫ forestry and logging operations;	
	▫ mining operations;	
	▫ mineral exploration activities;	
	▫ commercial outfitters;	
	▫ land use for traditional purposes; and	
	▫ agriculture and other land uses.	
	▪ Identify predicted effects of the Project on the quality and quantity of ground or surface water and implications for recreational uses.	Section 7.3
17.3	**Navigation** The Impact Statement must:	
	▪ Describe effects to navigable waterways, including to physical characteristics (e.g., width, depth, etc.), bank/bottom features, biological components, flow/tides, etc.;	Section 4.3.2.2 Section 7.3 Section 8.3.1 Section 8.3.3 Section 8.3.5 Section 10.3.1.1 Section 10.3.1.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe ancillary project components that will be constructed in, on, under, over, through or across navigable waterways to support the Project;	Section 4.3.2.2 Sections 3.2.1, 3.3.3, 3.3.4, Appendix D: 14.1.3
	▪ Describe potentially affected waterway users and describe consultation with waterway users and Indigenous groups regarding navigational use, issues raised and how issues were addressed; and	Section 16.2.2.7 Appendix L: Sections 4, 5, 7, and 8
	▪ Describe project effects to navigation and navigation safety, including potential obstructions to navigation (natural/man-made, other works, navigation aids, etc.).	Section 16.3.3 Section 19.3.1 Section 19.3.2
17.4	**Community Cohesion**	
	The Impact Statement must assess potential changes to local demographic conditions, including changes to population size and changes in the relative population of men and women, and younger and older people. The Impact Statement must:	
	▪ Describe in-and out-migration effects, including changes in social and cultural make-up of affected communities and changes in populations; and	Section 14.2.2.1 Section 14.2.2.3 Section 14.3.2 Section 14.3.3 Section 14.3.6 Section 14.3.7
	▪ Identify whether social divisions might be intensified as a result of the Project and evaluate effects to social cohesion, both between the project community and other surrounding First Nations.	Section 14.3.2 Section 14.3.3 Section 14.3.6 Section 14.3.7
17.5	**Community Well-being and Public Safety**	
	The Impact Statement must:	
	▪ Assess potential adverse and positive effects of changes to social conditions including, but not limited to:	Section 14.3.7
	▫ food security;	Section 14.2.2.3 Section 14.4.4
	▫ illegal or potentially disruptive activities, including:	
	– violent crime, including sexual and physical violence (with particular consideration of effects to specific subgroups in the community such as young people, women and girls);	Section 14.2.2.7
	– gender-based violence;	Section 14.3.7
	– human trafficking;	Section 17.3.3.10
	– vandalism;	Sections 14.2.2.2, 14.2.2.7, 14.3.7,
	– poaching;	Sections 12.3.6.4, 12.3.2.4, 12.3.2.4, 12.3.3.4, 12.3.7.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	– drug and alcohol distribution;	Section 14.1.2 Section 14.2.2.7, Section 14.4.7.2, Section 14.5.2.7.2
	– trafficking of illegal goods counterfeit goods;	Section 14.3
	– other crimes;	Section 14.3
	▫ cost of living;	Section 15.1.2 Appendix N: Section 15.3.2, Section 15.1.4,
	▫ income inequity;	Section 15.3.1
	▫ changes at the community level that affect social conditions as a result of increased population, workers camps, economic activity, cost of living, among other factors;	Section 15.3
	▫ non-commercial/trade economy;	Section 15.2.2.2.3 Section 16.3
	▫ examine barriers and constraints that prevent individuals or groups from benefitting and how they are magnified across different subgroups;	Section 14.3
	▫ employment, including type of jobs (fulltime vs part time, temporary vs permanent, skilled vs unskilled; distribution of jobs to youth vs adult, women vs others);	Section 15.2.2.3, Section 15.2.2.3.3, Section 15.3.1.1
	▫ education and access to training opportunities;	Section 14.2.2.6, Section 14.2.2.7, Section 14.3-Table 1432
	▫ housing availability and affordability, crowding; and	Section 14.2.2.2 Section 14.3.2
	▫ safety travel to and from connected communities, including by public, commercial, and private transport, and ride sharing.	Sections 14.3 and 16.3
	▪ Assess potential adverse effects on women's safety, including Indigenous women;	Section 14.3.7
	▪ Evaluate potential social effects associated with changes in disposable income, including potential cost-of-living effects, adverse and positive lifestyle changes, feelings of empowerment, distribution of benefits among affected people;	Section 14.3.7
	▪ Describe the potential opportunities expected to become available for youth, and how youth will gain access to these opportunities, considering the conditions described (e.g., youth living in urban centres who are attending secondary school, youth who have left the community to seek training or work); and	Section 14.3.4 Section 14.4.4
	▪ Consider the potential for stresses on community, family and household cohesion, alcohol and substance use, or illegal or other potentially disruptive activities.	Section 14.3.7
17.6	**Culture**	
	The Impact Statement must assess potential impacts to surrounding communities, including local Indigenous communities. The spatial and temporal boundaries for the assessment should be determined with the input from the community based on pre-contact in consideration of aspects that are relevant to the community's understanding of their culture. The Impact Statement must assess changes to:	
	▪ Structures, sites or things of historical, archaeological, paleontological or architectural significance and associated effects on other social and economic conditions, specifically burial sites;	Section 11.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe any anticipated effects to language, such as the relative balance of speakers of local languages, English, and French, and the availability of public services in these languages;	Section 19.3 Section 20.3 Executive Summary (English version) Executive Summary (French version)
	▪ Traditional cultural activities (such as religious ceremonies, traditional hunting, etc.) that might be caused by the project; and	
	▪ Culturally significant plants or wildlife.	
	Additional guidance is identified in Section 10 and in Appendix 1 of the TISG.	-
18	**Effects to Valued Components – Economic**	Section 15
	Within the context of the predicted changes to the biophysical environment, and health and social conditions, the proponent must assess the effects of the project on the economic valued components during all phases of the Project. All interconnections between these economic valued components and other valued components and interactions between effects must be described. The assessment must illustrate an understanding of linkages and effect pathways, so that when a change in one domain is predicted, there is an understanding of what other effects or consequences may be felt across the other domains. Indicators should be developed by the proponent using best practice, Agency guidance, and through engagement with Indigenous groups and the public. Rationale for the indicators chosen should be provided. If, after engaging with Indigenous groups and the public, the proponent determines that further valued components require assessment, it should do so with a rationale for the selections, and an explanation of how engagement informed them.	Section 15.3
	The proponent must analyze the community and Indigenous knowledge across diverse subgroups where possible to identify differential effects highlighted by these groups. Ethical guidelines and relevant cultural protocols governing research, data collection and confidentiality must be adhered to.	Section 15.2
	In assessing effects to valued components listed below, the analysis should discuss circumstances in a community where diverse subgroups, because of their particular circumstances, could experience adverse effects from the Project more severely than others, or be excluded from potential benefits, including Indigenous peoples or other community relevant subgroups (e.g., women, youth, elders).	Section 15.2 Section 15.3
	The assessment of economic effects should take into consideration the longevity of economic opportunities related to the project (direct, indirect and induced) relative to project stages and how the Project is likely to influence the stability of the economy through economic diversity.	Section 15.3
	Of note, economic effects might extend over a larger geographic area than most other effects. For example, road construction affects not only the communities on the actual road, but also every community connected to the same regional road network. In some, but not all, cases, local economic effects may be smaller than regional economic effects: for example, a project could create several hundred local jobs, while improving business conditions for thousands of people elsewhere in the region.	Section 15.3
18.1	**Labour Market** The Impact Statement must:	
	▪ Describe the effects of the Project on the local and regional labour markets;	Section 15.3
	▪ Describe the number of new jobs (for each phase of the Project), and the expected rates of pay, and an analysis of differential effects across relevant subgroups, including by sex, age and other relevant identity factors as well as limitations to labour market access;	Section 4 Section 15.3
	▪ Describe longer-term labour market local and regional labour market effects as a result of the project;	Section 15.3
	▪ Describe plans to encourage local employment;	Section 15.3.2 Section 15.4.1
	▪ Describe plans to encourage the recruitment, development and retention of underrepresented groups in the Project (e.g., set targets for employment for specific groups);	Section 15.4.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe the Project's diversity and inclusion workforce development plans (e.g., youth with substance use programs);	Section 15.4.1
	▪ Describe any skills-matching issues related to the Project, including:	Section 15.3.2
	▫ whether there is a sufficient number of local workers with sufficient technical skills;	Section 15.3.2
	▫ if not, whether the project will require workers from outside the region;	Section 15.3.2
	▫ skills training and education opportunities as a result of the Project;	Section 15.4.1
	▫ describe any training or education programs or scholarships the proponent is supporting to enhance employment opportunities for local residents; and	Section 15.4.1
	▫ opportunities for diverse groups of women, and underrepresented groups, into higher-skilled jobs through provision of on-the-job training (e.g., surveyors, road safety auditors, and heavy equipment operators).	Section 15.4.1
18.2	**Housing and Consumer Prices** The Impact Statement must:	
	▪ Describe the predicted positive and adverse effects to accommodation/lodging, including housing supply, housing costs, and rental rates, both during the construction and operation phases; and	Section 14.2.2.2 Section 14.5.2.2 Section 15.2.2.2
	▪ Describe the effects of the Project on availability of goods and services and consumer prices, in particular for	
	▫ food;	Section 15.2.2.2
	▫ fuel; and	Section 15.2.2.2.1
	▫ electricity.	Section 15.2.2.2.1
18.3	**Business Environment** The Impact Statement must:	
	▪ Describe the potential positive and negative effects of the Project on local and regional businesses, during both construction and operation phases of the Project, including:	Section 15.3.4
	▫ procurement and contracting opportunities;	Section 15.3.4
	▫ an estimate of potential effects of the Project on the traditional economy, including the potential loss of traditional economies and jobs; and	Section 15.3.4
	▫ discuss the potential ability of local businesses to compete for project-related contracting.	Section 15.3.4
18.4	**Infrastructure** The Impact Statement must:	
	▪ Describe the effects on infrastructure, including:	Section 14
	▫ the extent of new road to be built, the number of connections to existing roads, the effect on travel times, and the additional traffic on existing winter roads;	
	▫ whether the Project will result in, or facilitate the construction of other infrastructure (such as railways, airports, power plants, transmission lines, pipelines, dams, water mains, sewage lines, etc.); and	
	▫ whether the Project will damage any existing infrastructure (same categories as above), how quickly this will be repaired, and how much the proponent will contribute to the repair cost.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe how the Project will affect the local/regional energy system, including:	
	▫ how power will be provided during the construction phase;	
	▫ once complete, how much power the Project is likely to use; and	
	▫ whether the Project will improve, or could improve, the local energy transmission system (e.g., by facilitating new transmission lines, by making it easier for repair crews to access the area, etc.).	
18.5	**Public Finances** The Impact Statement must:	
	▪ Describe the Project's effects on local/municipal, provincial/territorial, federal, and Indigenous group public finances, including:	
	▫ revenue from tax levies, royalties, revenue sharing and other means, and how this could vary over time; and	Section 15.3.4
	▫ the cost of any public contribution, subsidies or tax incentives to support the Project.	Section 15.2.1.5
18.6	**Overall Economic Impact** The Impact Statement must:	Section 15.3.3
	▪ Describe the Project's impact and consistency with any existing local or regional plans for	Section 15.3.3
	▫ economic development;	Section 15 Section 15.2.2.2.2 Section 15.3.2 Section 15.2.2.1 Section 15.3.1.1 Section 15.3.1.2
	▫ energy production;	
	▫ transportation and utilities and communication corridors (including community airports and winter roads);	
	▫ residential land use;	
	▫ commercial zoning;	
	▫ forestry and logging operations;	
	▫ commercial outfitters; and	
	▫ other land uses.	
	▪ Provide a qualitative analysis and description of the extent to which the Project may facilitate developments, including mining projects, mineral exploration activities and other resource development in the area;	Section 15.4.3
	▪ Provide an estimate and description of the Project's direct, indirect, and induced economic impact during construction and operation, such as:	Section 15.3.3
	▫ effects on individual and community income (e.g., market economy, government transfer payments etc.);	Section 15.3.1.1
	▫ effects on the broader economic contributors to the regional economy, such as small businesses (e.g., nature and outdoor tourism);	Section 15.3
	▫ effects to local traditional subsidized and market economies, and current market trends;	Section 15.3
	▫ any measurable effects on provincial/territorial GDP; and	Section 15.3.2.2 Section 15.3.2.3 Section 15.5.2.2
	▫ increased consumer spending.	
	▪ Provide the sources and methodologies used for developing multipliers and estimates to calculate the figures above.	Sections 14.1 and 15.1
	Where a generic multiplier may not accurately reflect the specific situation of the Project being assessed, evidence should be provided of specific economic activity that will result from the Project going ahead.	Section 15.9
	Additional guidance is identified in Appendix 1 of the TISG.	-

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
19	**Effects to Indigenous Peoples and Impacts on the Exercise of Aboriginal and Treaty Rights**	
	The proponent must engage with all Indigenous groups identified in the *Indigenous Engagement and Partnership Plan* in order to identify and understand the potential impacts of their Projects on Indigenous peoples, and to include Indigenous knowledge into the impact assessment. Engagement with Indigenous groups is required to inform the impact assessment and identify measures to avoid or minimize potential impacts on the exercise of rights of Indigenous peoples from the Project. This engagement may also identify potential positive outcomes, including measures that could improve the underlying baseline conditions that support the exercise of rights. Engagement should involve ongoing information sharing and collaboration between the proponent and other Indigenous groups potentially affected by the Project. This collaboration will help validate the assessment findings. The results of any engagement should be presented in the Impact Statement and, as best as possible, should reflect the perspective of the Indigenous peoples involved.	Section 19.1 Section 19.2 Section 19.3 Section 19.4 Section 19.5
	The proponent must provide an opportunity for Indigenous groups potentially impacted by the Project to review the information prior to submission of the Impact Statement. The Impact Statement must indicate where input from Indigenous groups has been incorporated, including Indigenous knowledge. Information should be specific to the individual Indigenous group(s) involved in the assessment, and describe contextual information about the members within an Indigenous group (e.g., women, men, Elders and youth). The proponent must analyze the community and Indigenous community knowledge across diverse subgroups where possible to identify differential effects highlighted by these groups.	Section 19.2.1.5 Section 19.2 Section 19.3 Section 19.5
	Ethical guidelines and relevant cultural protocols governing research, data collection and confidentiality must be adhered to.	Section 19.2.1.5
	Where Indigenous groups do not wish to participate, the proponent is to encouraged to continue sharing information and analysis with the Indigenous groups of the potential effects of the Project, and to use available public sources of information to support the assessment. The proponent must show evidence that effort to engage with all Indigenous groups potentially impacted was made.	Section 19.2.1.5 Section 19.2 Section 19.3 Section 19.5
	Requirements for engagement with Indigenous groups are discussed in further detail in section 6 of this document.	-
19.1	**Effects to Indigenous Peoples**	
	The Impact Statement should provide information on how the Project may impact Indigenous peoples, as informed by the Indigenous groups involved. Information on measures proposed to address adverse effects should also be provided, including the perspectives of Indigenous groups on potential mitigation measures. The proponent is encouraged to apply Agency guidance on engaging with Indigenous groups and appropriate methodologies for assessing effects and impacts on the exercise of rights of Indigenous peoples. Where not possible, the proponent should provide a rationale and show efforts made to engage with all Indigenous groups.	Section 19.3 Section 19.4
	The potential effects, to consider assessing include both adverse and positive effects to the current use of land and resources for traditional purposes, physical and cultural heritage, and environmental, health, social and economic conditions of Indigenous peoples impacted by the Project, including interferences of the Project with the following:	
	▪ Quantity and quality of resources available for harvesting (e.g., species of cultural importance, including traditional and medicinal plants);	Section 19.5.1 Section 19.5.3
	▪ Access to culturally important harvesting areas or resources of importance;	Section 19.3.2.1 Section 19.4.1.2
	▪ Experiences of being on the land, including ability to pass on Indigenous knowledge and language (e.g., impacted from: changes in air quality, noise exposure, effects of vibrations from blasting and other activities);	Section 14.3
	▪ Current and future availability and quality of country foods (traditional foods);	Section 19.5.3 Appendix O - Section 5.1.2
	▪ Increased reliance on country foods as a result of the Project due to increased food prices, including any change to the required hunting quotas of impacted communities;	Section 19.2.2 Appendix O - Section 5.1.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ The use of travel ways, navigable waterways and water bodies;	Section 19.3.2 Section 19.3.2.1 Section 19.5.2.1
	▪ Commercial and non-commercial fishing, hunting, trapping and gathering and cultural or ceremonial activities and practices;	Section 19.2.1.5 Section 19.5.1.1
	▪ Commercial, non-commercial and trade economies; and,	Section 19.1.3 Section 19.3.1.1.1 Section 19.5.3
	▪ Cultural heritage, and structures, sites or things of historical, archaeological, paleontological or architectural significance to groups, including, but not limited to:	Section 20.3
	▫ the loss or destruction of physical and cultural heritage;	Section 20.3
	▫ changes to access to physical and cultural heritage;	Section 20.3
	▫ changes to the cultural value, spirituality, or importance associated with physical and cultural heritage;	Section 20.3
	▫ sacred, ceremonial or culturally important places, objects, or things, including languages, stories and traditions; and	Section 20.3
	▫ visual aesthetics over the life of the Project and post-Project abandonment or decommissioning.	Section 1.1
	As a best practice, proponents are encouraged to also include the following:	
	▪ A commitment to preferentially employ Indigenous people from Indigenous groups identified in the Indigenous Engagement and Partnership Plan and use of the Northern Ontario Network of Indigenous Training Organizations (e.g., Indigenous Skills and Employment Training network[68]); [68] https://www.canada.ca/en/employment-social-development/programs/indigenous-skills-employment-training/service-delivery-organizations.html#a4	Section 19.2.2.3.11 Section 19.3.2.1.2 Section 19.4.2.6 Section 19.5.3
	▪ A description of the timeframe for the employment or opportunity how long such opportunities will be available, types of jobs available;	Section 19.2.1.4 Section 19.2.2.3.12 Section 19.3.1 Section 19.4.2 Section 19.4.4 Appendix N
	▪ Inter-generational impacts of the Project on community members, including future economic opportunities associated with the Project, with a specific discussion or impacts to youth;	
	▪ Effects on the baseline social and health conditions of Indigenous groups;	
	▪ An estimate of the anticipated levels of Indigenous economic participation in the Project in comparison to the total project requirements (e.g., number of workers, disaggregation by gender and age);	
	▪ A description of any plans for cultural sensitivity training for non-Indigenous employees to promote a safe work environment that supports the well-being of Indigenous employees;	
	▪ A description of any plans for cultural competence training for non-Indigenous employees to ensure a respectful professional relationship with Indigenous businesses;	
	▪ A description of any plans for cultural competence training for non-Indigenous employees to ensure a respectful professional relationship with Indigenous businesses;	
	▪ A description of how Indigenous knowledge was used in assessing environmental, health, social and economic effects to Indigenous peoples, groups and communities;	
	▪ A description of inter-generational impacts of the Project on community members, including by future economic opportunities associated with the Project;	
	▪ A description of effects on the baseline social and health conditions of Indigenous groups in the community; and	
	▪ Aforementioned information disaggregated by sex, age, and other community relevant identify factors to support GBA+ analysis;	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
19.2	**Impacts on the Exercise of Aboriginal and Treaty Rights**	
	The Impact Statement should describe the level of engagement with Indigenous groups regarding potential impacts of the project on the exercise of rights, and where possible, the Project's potential interference with the exercise of rights. Where an Indigenous group has not provided this information to the proponent, or both parties agree that it is better to provide information related to the impact on the exercise of rights directly to the Government of Canada, the proponent should describe a rationale for the approach taken. Proponents are encouraged to discuss with Indigenous groups their views on how best to reflect the assessment of impacts on the exercise of rights in their Impact Statement. This may include supporting Indigenous-led studies that are to be provided publicly and to the Government of Canada.	Section 19.3 Section 19.5
	For more information on identifying and assessing impacts on the exercise of rights, please see: the *Interim Guidance on Assessing Potential Impacts on the Rights of Indigenous Peoples under the Impact Assessment Act*.	Section 19.1 Section 19.6
	The proponent and Indigenous groups may consider:	
	▪ How the Project may contribute cumulatively to any existing impacts on the exercise of rights of Indigenous peoples, as identified by the Indigenous groups;	Section 19.2.1.3
	▪ The interference of the Project on the quality and quantity of resources available for the exercise of rights;	Section 19.3.1.2.3
	▪ The interference of the Project on the access to areas important to the exercise of rights (including through effects to navigable waterways);	Section 19.4.1.4
	▪ The interference of the Project on the experience associated with the exercise of rights;	Section 19.5
	▪ The interference of the Project on Indigenous traditions, laws and governance; and,	Section 19.5.2.1
	▪ The severity of the impacts on the exercise of rights of Indigenous peoples, as identified by the Indigenous groups,	Section 19.6
	Proponents are encouraged to work together with Indigenous groups to find mutually agreeable solutions to concerns raised about a proposed Project, especially for those concerns raised by Indigenous peoples about impacts on the exercise of their rights. The Impact Statement should detail:	
	▪ Any measures identified in an attempt to avoid, minimize, offset or otherwise address potential adverse impacts of the Project on the exercise of rights;	Section 19.4
	▪ where measures are proposed by Indigenous groups, the proponent should respond with its intent to implement them, as appropriate; and,	Section 19.4
	▪ With respect to mitigation measures proposed by the proponent, the Impact Statement should include perspectives of the potentially impacted Indigenous groups, on the effectiveness of particular mitigation measures on such impacts.	Section 19.4
	Where no mitigation measures are proposed or mitigation is not possible, the Impact Statement should identify potential level of severity of the adverse impacts on the exercise of Aboriginal and Treaty rights, as identified by the Indigenous group(s).	Section 19.5
	Mitigation measures are further discussed in section 20.	Section 19.4
	Additional guidance is identified in Section 12 and in Appendix 1 of the TISG.	
20	**Mitigation and enhancement measures**	
	Every impact assessment conducted under IAA must identify measures that are technically and economically feasible and that would mitigate any adverse environmental, health, social and economic effects of the Project. Conversely, the proponent must identify enhancement measures to increase positive effects. Under IAA, mitigation measures include measures to eliminate, reduce, control or offset the adverse effects of a Project, and include restitution for any damage caused by those effects through replacement, restoration, compensation or other means. Measures to enhance positive project effects may include skills training, local procurement strategies, investments in community infrastructure (e.g., roads, services).	Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 17.4 Section 18.4 Section 19.4 Section 20.4 Appendix E Section 7 in Appendix G Section 13 in Appendix J Section 5 in Appendix M Section 8 in Appendix P Section 7.3 in Appendix R Section 6 in appendix S
	Proposed mitigation and enhancement measures are discussed during the review of the Impact Statement and may be modified as a result of the review. Mitigation and enhancement measures may be considered for inclusion as conditions in the impact assessment Decision Statement. If there is an ongoing or completed regional assessment in the proposed project area, the proponent should use the information generated through that process to inform possible mitigation and enhancement measures.	Appendix E Appendix N Appendix V
	As a first step, the proponent is encouraged to use an approach based on the avoidance and reduction of the adverse effects at the source. The proponent must engage with Indigenous groups when developing mitigation measures. The proponent is also encouraged to work with the local communities, including municipalities and Indigenous groups to align project goals with an aim to enhance positive project effects. Such an approach may include the modification of the design of the Project or relocation of project components. The Impact Statement must:	Sections 6 to 20 (Refer to Consideration of Input from Engagement and Consultation Activities and Incorporation of Indigenous Knowledge and Land and Resource Use Information)
	▪ Describe the standard mitigation practices, policies and commitments that constitute proven technically and economically feasible mitigation measures and that are to be applied as part of standard practice regardless of location as well as any new or innovative mitigation measures being proposed. Mitigation measures must be specific, achievable, measurable and verifiable, and must be described in a manner that avoids ambiguity in intent, interpretation and implementation;	Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4 Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 17.4 Section 18.4 Section 19.4 Section 20.4 Appendix E

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ In relation to birds, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	
	▫ to avoid harm to migratory birds, clearing and construction should be conducted outside of the core breeding period. Follow ECCC guidance for avoiding harm[69]; [69] https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html	Section 12.1.1
	▫ refer to ECCC guidance for nesting periods[70]; [70] https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html	Section 12.4.6
	▪ It should be noted that these dates cover the core period for nesting activity of migratory birds, reducing the risk of taking a nest or eggs of a migratory bird. This recommendation does not authorize the disturbance, destruction, or take of a migratory bird, its nest, or its eggs outside of these date ranges.	Section 12.1.1
	▪ In relation to bats, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	-
	▫ follow decontamination protocols for White-nose Syndrome by the Canadian Wildlife Health Cooperative[71]; and [71] http://www.cwhc-rcsf.ca/docs/WNS_Decontamination_Protocol-Nov2016.pdf	Not applicable Note: The stated decontamination protocols are for work in a hibernaculum, There are no hibernacula identified in the WSR area.
	▫ apply appropriate mitigation measures, such as timing windows and setbacks, to all areas with potential roosting habitat, unless each structure is individually assessed and verified to not be used for roosting.	Section 12.4.1
	▪ In relation to caribou, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	Section 13.4.3.1.1.
	▫ The following provincial guidance documents should be followed:	
	– Best Management Practices for Renewable Energy, Energy Infrastructure and Energy Transmission Activities and Woodland Caribou in Ontario[72]; and [72] https://files.ontario.ca/environment-and-energy/species-at-risk/mnr_sar_bmp_ener_car_en.pdf	Section 13.4.3
	– Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits[73]. [73] https://files.ontario.ca/environment-and-energy/species-at-risk/stdprod_093115.pdf	Section 12.2.2.2.2.1
	▪ Describe the Sediment and Erosion Control Plan, including the proposed mitigation measures and their effectiveness on the contaminants of concern;	Section 6.4 Sections 2.1.8 and 2.2.1 in Appendix E
	▪ Describe the Project's environmental protection plan and its environmental management system through which the proponent will deliver this plan. The plan must provide an overall perspective on how potentially adverse effects would be minimized and managed over time;	Section 22 Sections 2, 3, and 5 in Appendix E
	▪ Discuss the mechanisms the proponent would use to require its contractors and sub- contractors to comply with these commitments and policies and with auditing and enforcement programs;	Section 22 Section 3 in Appendix E

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe mitigation measures that are specific to each environmental, health, social or economic effect identified. Mitigation measures are to be written as specific commitments that clearly describe when and how the proponent intends to implement them, what decision-making criteria will be used, and the outcome these mitigation measures are designed to address;	Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4 Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 17.4 Section 18.4 Section 19.4 Section 20.4 Appendix E
	▪ Assess impacts of each potential route option for effects to valued components and provide a quantitative comparison;	Section 3.2.4 Section 3.2.5 Section 3.3
	▪ Include mitigation measures for all project components and where components are to be decommissioned and abandoned, include planned activities to do so. Project components that may be abandoned and decommissioned during the construction or operation phases may include access roads, temporary laydown areas, aggregate extraction sites and other temporary sites;	Section 4.4.2.6 Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4 Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 17.4 Section 18.4 Section 19.4 Section 20.4 Sections 5.19 and 5.21 in Appendix E

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Include measures to address sensory disturbance and the resulting functional loss of habitat;	Section 9.4.3 Section 10.4.2.1 Section 12.4.2.2.5 Section 12.4.2.3.5 Section 12.4.3.2.3 Section 12.4.4.2.4 Section 12.4.4.4.1 Section 12.4.5.4 Section 12.4.6.2.4 Section 12.4.7.2 Sections 2.1.11, 2.1.12, 2.2.4, and 5.4 in Appendix E Section 13 in Appendix J
	▪ Incorporate Wildlife Friendly road-design principles and features, which may include underpasses and wildlife bridges (as well as monitoring to estimate bat and other wildlife mortality);	Section 4.3.1.8 Section 4.4.3.3 Section 4.4.3.4 Section 4.4.2.9 Section 12.4.2.4 Section 12.12 Sections 2.1.19, 3.3, 5.14 in Appendix E
	▪ Include measures to prevent the road from being a conduit for the spread of invasive species such as European Common Reed (*Phragmites australis*);	Section 11.4.1 Section 11.4.1.3.2 Section 11.4.6
	▪ Describe measures to be used for stockpiling all stripped peat for use during site reclamation, or describe the plan for stockpiling stripped peat and mitigate effects related to its long term stockpiling or removal;	Section 11.4.1.3.1
	▪ Describe mitigation measures that are specific to identified effects to Indigenous peoples;	Section 11.4.4.1 Section 19.4
	▪ Describe mitigation measures proposed by Indigenous peoples and the consideration of those in the Project;	Sections 6.1.2 and 6.1.3, Sections 7.1.2 and 7.1.3 Sections 8.1.2 and 8.1.3 Sections 9.1.2 and 9.1.3 Sections 10.1.2 and 10.1.3 Sections 11.1.2 and 11.1.3 Sections 12.1.2 and 12.1.3 Sections 13.1.2 and 13.1.3 Sections 14.1.2 and 14.1.3 Sections 15.1.2 and 15.1.3 Sections 16.1.2 and 16.1.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Sections 17.1.2 and 17.1.3 Sections 18.1.2 and 18.1.3 Sections 19.1.2 and 19.1.3 Sections 20.1.2 and 20.1.3 Section 19.4
	▪ Identify and describe mitigation measures, including alternative means of carrying out the Project that would avoid or lessen potential adverse effects to terrestrial and aquatic species and/or critical habitat listed under Schedule 1 of the *Species at Risk Act*, including but not limited to woodland caribou and Lake Sturgeon (*Aciper fulvescens)*. These measures:	Section 3 (alternatives assessment)
	▫ are to be consistent with any applicable recovery strategy, action plan or management plan and will also identify and describe mitigation measures to avoid or lessen adverse effects to COSEWIC-assessed species; and	Section 13.4.2. Section 13.4.3 Section 13.4.4 Section 13.4.5 Section 13.4.6 Section 13.4.7
	▫ must be described in terms of the effectiveness of each measure to avoid the adverse effects and include a comprehensive science-based rationale for proposing the selected mitigation measures.	
	▪ Identify measures to prevent and mitigate the risk of engaging in harmful, destructive or disruptive activities in key sensitive periods and locations (e.g., breeding bird season, migration and nesting) to migratory birds, their nests and eggs, in areas frequented migratory birds;	Section 12.4.1 Section 12.4.2 Table 12-42
	▪ Identify measures to prevent and mitigate the risk of engaging in activities that cause harmful alteration, disruption or destruction in key sensitive periods and locations (e.g., spawning) for fish;	Section 10.4.2.1.2
	▪ Identify measures to prevent and mitigate the risk of engaging in harmful, destructive or disruptive activities in key sensitive periods and locations (e.g., hunting season) to wildlife and wildlife habitat;	Section 12.4.1. Section 12.4.2. Section 12.4.6.4 Section 12.4.3.4
	▪ Identify measures to avoid the deposit of substances harmful to fish or migratory birds in water or areas frequented by fish and/or migratory birds;	Section 10.4.1.2.6
	▪ Identify measures to prevent water crossings (i.e., culverts) from negatively impacting freshwater fish movement (e.g., due to flow, debris, or “perching”);	Section 10.4.1.3
	▪ Identify opportunities to involve Indigenous groups in monitoring activities during the construction and operations phases to mitigate effects on traditional activities;	Section 6.10 Section 7.10 Section 8.10 Section 9.10 Section 10.10 Section 11.13 Section 12.12 Section 13.10 Section 14.10 Section 15.10 Section 16.10

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 17.10 Section 18.10 Section 20.10 Section 22 Section 8 in Appendix N
	▪ Provide best technically and economically feasible mitigation approaches to habitat mitigation that follow the hierarchy:	Section 11.4 Section 12.4 Section 13.4 Appendix E
	▫ avoid potential impact;	Section 3 Section 11.4 Section 12.4 Section 13.4 Appendix E
	▫ minimize potential impact;	Section 3 Section 11.4 Section 12.4 Section 13.4 Appendix E
	▫ provide biodiversity offsets to address any residual adverse environmental effects that cannot be avoided or sufficiently minimized; and	Section 11.4.5 Section 13.4.7.2.2
	▫ provide justification for moving from one mitigation alternative to the next.	Section 12.4 Section 13.4 Appendix E
	▪ In relation to wetlands, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	Section 11.4.1 Section 11.4.2
	▫ demonstrate what efforts have been made to avoid and minimize effects to wetlands, and that the mitigation hierarchy has been followed;	Section 5.2.4 Section 11.4.1 Section 11.4.2
	▫ demonstrate that mitigation measures have taken into account the health, integrity, and availability of wetland (including peatlands) habitats for the species that rely on them;	Section 11.3.2 Section 11.3.3 Section 11.4.1 Section 11.4.2 Appendix E
	▫ explain why alternative locations or means to carry out the Project, or alternatives to the Project were not possible, and how effects to the wetlands will be minimized;	Section 3.1.2 Section 3.2.2 Section 11.3.2 Section 11.3.3 Section 11.4.1 Section 11.4.2

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ explain how avoidance was considered as the first option and how it can be achieved by identifying alternate means of carrying out the Project (e.g., project location or design) and by considering alternatives to the Project;	Section 3.1.2 Section 3.2.2 Appendix E
	▫ explain how minimization can be achieved through project modification or implementation under special conditions after alternative means to the Project have been considered. Describe how the following were considered:	Section 3.1.2 Section 3.2.2 Appendix E
	– standard procedures and techniques if available for sector or jurisdiction;	Section 11.4 Section 3.1.2 Section 3.2.2 Appendix E
	– procedures and techniques based on sound ecological principles and the best science available;	Section 3.1.2 Section 3.2.2 Section 11.2.1.3 Section 11.2.1.4 Section 11.2.2 Section 11.4.1 Section 11.4.2 Section 11.4.5 Appendix E
	– proven measures over new or experimental techniques;	Section 11.2.1.3.4 Section 11.2.1.4 Appendix E
	– minimization techniques that take natural succession into account, and should provide for environmental variability over time;	Section 11.4.1 Section 11.4.2 Section 11.4.5 Appendix K-3 Appendix K-4 Appendix E
	– compensation for any residual effect that couldn't be minimized through the following order: restoration, enhancement of existing wetlands, or creation of new wetlands;	Section 11.4.5 Appendix K-3 Appendix K-4
	– evidence that functions can be replaced by the proposed offset activities; and	Section 11.4.5 Appendix K-3 Appendix K-4
	– note that the above requirements are particularly important for peatlands as there is little experience in carrying out restoration or offsets.	Section 11.4.5 Appendix K-3 Appendix K-4
	▫ Explain mitigation measures developed specifically for peatlands.	Section 11.4.1 Section 11.4.2 Section 11.4.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Appendix K3 Appendix K4
	▪ In relation to Birds mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	Section 12.4.1 Section 12.4.2 Section 12.4.2.2.1 Table 12-41 Section 12.4.6.1 Section 12.4.6.4 Table 12-45
	▫ specifically address mitigation of effects to eskers and related features rich in aggregate material, as these features are likely to be strongly impacted, to a degree much higher than their prevalence on the landscape. Describe, at a landscape scale rather than a single assessment of multiple hectares, how these measures address this uncommon high value landcover for forest birds during migration and breeding; and	Section 12.4.2.1
	▫ describe the cumulate effects of development on this type of landscape;	Section 21.4.7.4.2 Table 21-33
	▪ In relation to bats, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	
	▫ specifically address mitigation of effects to eskers and related features rich in aggregate material, as these are important features for bat hibernacula;	Section 13.4.2.1
	▫ describe the effectiveness of different mitigation options taking into consideration the configuration of resources in the environment, and how local bat populations are using these resources. Describe how bat behavior (differentiated by species) was taken into account by considering the geographic location and time-period;	Section 13.4.5
	▫ at a minimum, the following mitigation should be applied:	
	– spatial avoidance (setbacks):	
	• 120 metre is recommended; and	Section 13.4.5.1.1
	• for tree roosts, apply setbacks to the entire maternity roost complex and for hibernacula apply setback to entire underground cave/mine network.	Section 13.4.5.1.1
	– temporal avoidance (timing of disturbance, roost destruction or exclusion):	
	• avoid disturbance, destruction and exclusion between April 30 – September 1.	Section 13.4.5.1 Section 13.4.5.2 Further details will be provided in Final EAR/IS
	– manage vegetation at bridges and other commuting corridors that intersect highways:	
	• manage vegetation height and tree canopy height so that it is not in line with the height of traffic; and	Section 13.4.5.4
	• include bat monitoring at bridges, close to significant habitat features (e.g., roosts, hibernacula, significant foraging habitats) and identified bat commuting corridor locations to estimate mortality. Where mortality is higher than background rates, compensation measures are required to reduce mortality.	Section 13.10 Section 13.4.5.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	– Lighting:	
	• avoid or minimize the use of artificial light in bat habitats;	Section 13.4.2.2 Section 13.4.5.2
	• select lower intensity lighting;	Section 13.4.2.2 Section 13.4.5.2
	• use lighting fixtures that restrict or focus illumination to target areas; and	Section 13.4.2.2 Section 13.4.5.2
	• avoid lights that emit blue/green/white/UV wavelengths.	Section 13.4.2.2 Section 13.4.5.2
	▪ Other compensation (offsets/tradeoffs).	Offsetting or compensation plans will be developed during detail design phase.
	▪ In relation to caribou, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	
	▫ demonstrate that avoidance and minimization measures will be applied for boreal caribou and its critical habitat:	Section 13.4.3.1.1
	– assess mitigation measures at the scale of provincial ranges and federal ranges and incorporate the results of population level analyses;	Section 13.4.3.1.1
	– describe all reasonable alternative means of carrying out the Project that would avoid the adverse effects of the Project on boreal caribou; a description of how these alternative means have been considered; and a rationale to confirm that the best solution has been adopted to address adverse effects on boreal caribou;	Section 3
	– describe all feasible measures that will be taken to minimize the adverse effects of the Project on boreal caribou and its critical habitat:	Section 13.4.3.1.1
	• minimize the footprint of development and consider locations where habitat is already disturbed;	Section 13.4.3.1.1
	• restore habitat to provide availability of undisturbed habitat over time;	Section 13.4.3.1.1
	• avoid destruction of biophysical attributes (see Appendix H of the recovery strategy[74]; [74] https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/woodland- caribou-boreal-2019.html	Section 13.4.3.1.1
	• mitigate noise, light, smell, and vibration;	Section 13.4.3.2.1
	• develop an access management plan; and	Section 13.4.3.4.1
	• use techniques to prevent use of the corridor by predators.	Section 13.4.3.4.1
	▪ Provide offsetting or compensation plans to address all residual effects to species at risk, and their critical habitat, migratory birds, fish and fish habitat and/or wetland functions (if applicable) for review during the impact assessment process; the plans should:	Section 13.4.7.1.2 (Sturgeon) Offsetting or compensation plans will be developed during detail design phase.
	▫ describe the baseline condition of the species at risk, critical habitat, migratory birds and wetland functions potentially impacted by the Project;	
	▫ apply the mitigation hierarchy;	
	▫ identify and describe residual effects;	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ identify a compensation ratio with rationale, including how any policies or guidance provided by federal authorities, provincial authorities and Indigenous groups have been considered;	
	▫ identify the location and timing of implementation of compensation projects (where feasible);	
	▫ identify and describe the success criteria;	
	▫ identify and detail non-habitat measures;	
	▫ describe how the proposed measures align with published provincial and federal recovery, management, or action plans and strategies for species at risk;	
	▫ identify the parties responsible for implementation, including monitoring and review;	
	▫ identify indicator species for setting compensation objectives. Identification should be based baseline data, Bird Conservation Strategies, and other information where available (note: species at risk should not be used as indicator species; compensation efforts need to be directed specifically to these species);	
	▫ describe the functions gained at the compensation site(s);	
	▫ provide evidence that functions can be replaced by the proposed offset activities;	
	▫ describe the process of selecting proposed compensation site(s) and associated baseline condition(s); and	
	▫ provide a description of the monitoring schedule and activities to be completed to monitor the success of compensation activities.	
	▪ Offsets are required to address residual effects, ECCC guidance on conservation allowances should be used[75]; [75] https://www.canada.ca/en/environment-climate-change/services/sustainable- development/publications/operational-framework-use-conservation-allowances.html	
	▪ In relation to designing offsets for wetlands, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. In addition, the following mitigation measures should be considered by the proponent:	Section 11.4.5 Appendix K-3 Appendix K-4
	▫ indicate if it isn't possible to compensate for lost functions in cases where wetlands are unique, or have habitat functions that support large proportions of migratory birds, or provide habitat required by species at risk, and take that into account when designing offsets;	Section 11.4.5 Appendix K-3 Appendix K-4
	▫ use a minimum ratio of 2:1 of area of wetland restored/created to original wetland area;	Section 11.4.5 Appendix K-3 Appendix K-4
	▫ clearly indicate the amount of wetlands (location, extent) for which residual effects should be addressed through offset measures;	Section 11.3.2 Section 11.3.3 Section 11.4.5 Appendix K-3 Appendix K-4
	▫ prioritize restoration of drained or altered naturally occurring wetlands of the same type and function as those impacted. Restored wetlands are preferred over enhanced wetlands, both of which are preferred over newly created wetlands;	Section 11.4.5 Appendix K-3 Appendix K-4
	▫ compensate lost wetland functions on-site if site conditions are suitable for wetland functions. Second preference is in the same watershed from which they were lost. Third preference is in the same ecosystem from which they were lost;	Section 11.4.5 Appendix K-3 Appendix K-4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ incorporate compensation measures to minimize the time lag in availability of habitat and functions between when the adverse effects occur to when they have been fully replaced; and	Section 11.4.1 Section 11.4.2 Section 11.4.5 Appendix K-3 Appendix K-4
	▪ In relation to designing offsets for species at risk, mitigation measures should be developed in collaboration with federal authorities and included in the Impact Statement. See Template 2 in the proposed Species at Risk Act Permitting Policy for guidance on preparing an offsetting plan[76]. [76] https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/policies-guidelines/proposed-policy-2016.html#_6	Section 11.4.3 Section 11.4.4 Section 11.4.5 Appendix K-3 Appendix K-4
	▪ Specify the actions, works, minimal disturbance footprint techniques, best available technology, best environmental practices, corrective measures or additions planned during the Project's various phases to eliminate or reduce adverse effects;	Section 4.2 Section 4.3.1.3.1 Section 4.4.2.3.4 Section 4 Section 22 Section 23 Section 26 Section 27.4 Section 11.4 Appendix E Appendix K-2 Appendix K-3 Appendix K-4 Appendix N
	▪ Describe measures included in the design of the Project to mitigate its greenhouse gas emissions. These could include design decisions such as the use of low-emitting technologies, the use of low-carbon or renewable fuel or carbon capture and storage;	Section 11.4.1.3.4 Section 11.4.1.3.5 Appendix H Appendix G Appendix E Appendix 9.4 Appendix H
	▪ Describe practices that will be taken to mitigate the Project's greenhouse gas emissions, such as anti-idling practices for mobile equipment, or continuous monitoring systems;	Section 11.4.1.3.4 Section 11.4.1.3.5 Appendix H Appendix G Appendix E Appendix 9.4 Section 22 Section 2.2.2 in Appendix E Appendix H

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe information on habitat banks or any habitat credits that have been or will be obtained, including the regime that issued them, project type, project start date and vintage year. Proponents may also provide information on their intent to acquire or generate international habitat credits;	Pending
	▪ Provide an assessment of the likely effectiveness of the proposed technically and economically feasible mitigation measures and describe all relevant uncertainties on the effectiveness of the measures;	Section 6.5 Section 7.5 Section 8.5 Section 9.5 Section 10.5 Section 11.5 Section 12.5 Section 13.5 Section 14.5 Section 15.5 Section 16.5 Section 17.5 Section 18.5 Section 19.4.5 Section 20.5
	▪ Describe all relevant uncertainties on the effectiveness of the measures to address the Project residual adverse effects;	Section 6.8 Section 7.8 Section 8.8 Section 9.8 Section 10.8 Section 11.11 Section 12.10 Section 13.8 Section 14.8 Section 15.8 Section 16.8 Section 17.8 Section 18.8 Section 20.8
	▪ Identify other technically and economically feasible mitigation measures that were considered but are not proposed for implementation, and explain why they were rejected;	Section 3.2
	▪ Justify any trade-offs between cost savings and effectiveness of the various forms of mitigation measures;	Section 3.2.5
	▪ Assess any potentially adverse environmental effects associated with the mitigation method itself;	Not Applicable
	▪ Identify and describe the use and application of best available technology and best environmental practice, including its effectiveness on the contaminants of concern, to prevent adverse effects on the receiving environment other than for GHG reduction purposes;	Appendix 9.4 Section 22 Section 2.2.2 in Appendix E Appendix H

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Information on any offset credits that have been or will be obtained, including the offset regime that issued the credits, project type, project start date and vintage year. Proponents may also provide information on their intent to acquire or generate international offset credits;	Section 2 of Appendix H
	▪ To inform potential mitigation measures, a comparison of the Project's projected GHG emission intensity of similar projects in Canada and internationally that are a good example of energy efficiency or low emissions intensity projects. The comparison should explain why the emissions intensity may be different;	Appendix H
	▪ Identify the party responsible for the implementation of mitigation measures and the system of accountability;	Not Applicable (please refer to Section 4.4.3)
	▪ Where appropriate, provide details regarding financial liability and compensation in place as required by regulation or company commitment in relation to decommissioning or abandonment;	Not Applicable (see Section 1.1)
	▪ Propose differentiated mitigation measures for all potential adverse effects identified, if applicable, so that adverse effects do not fall disproportionately on vulnerable populations, certain Indigenous groups, or certain communities, and they are not disadvantaged in sharing any development benefits and opportunities resulting from the Project. These mitigation measures should be developed in collaboration with those who are vulnerable and/or disadvantaged;	Appendix M
	▪ Propose mitigation measures to reduce all potential adverse effects to health conditions of all potentially impacted communities and Indigenous groups and present opportunities for enhancing positive effects;	Section 17.4
	▪ Propose mitigation measures to reduce all potential adverse effects to social conditions of all potentially impacted communities and Indigenous groups and present opportunities for enhancing positive effects;	Section 14.4
	▪ Propose mitigation measures to reduce all potential adverse effects to economic conditions of all potentially impacted communities and Indigenous groups and present opportunities for enhancing positive effects such that benefits are not disproportionate on some;	Section 15.4
	▪ Document specific suggestions raised by each Indigenous group for avoiding, mitigating or otherwise accommodating the Project's environmental, health, social and economic effects, including potential effects and impacts on the exercise of rights of Indigenous peoples and:	Section 6.1.2 and 6.1.3, Section 7.1.2 and 7.1.3 Section 8.1.2 and 8.1.3 Section 9.1.2 and 9.1.3 Section 10.1.2 and 10.1.3 Section 11.1.2 and 11.1.3 Section 12.1.2 and 12.1.3 Section 13.1.2 and 13.1.3 Section 14.1.2 and 14.1.3 Section 15.1.2 and 15.1.3 Section 16.1.2 and 16.1.3 Section 17.1.2 and 17.1.3 Section 18.1.2 and 18.1.3 Section 19.1.2 and 19.1.3 Section 20.1.2 and 20.1.3 Section 19.4
	▫ for those mitigation measures intended to address effects of changes to the environmental, health, social and economic conditions of Indigenous peoples or impacts on the exercise of rights of Indigenous peoples, provide a description of the consultation with Indigenous groups regarding the residual effects; and	Pending

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▫ describe whether and how these measures will be incorporated in the Project design.	Sections 6 to 20 (refer to Tables - Consideration of Input from Engagement and Consultation; and Incorporation of Indigenous Knowledge and Land and Resource Use Information) Section 27
	▪ Identify opportunities for enhancing positive effects, such as creation of local employment and infrastructure improvements;	Section 15.4 Appendix N
	▪ Describe supplier development initiatives, including identification of potential local suppliers, providing them with information about technical, commercial and other requirements, and debriefing unsuccessful bidders;	Not Applicable
	▪ Describe any procurement policies (e.g., bid packaging) that facilitate the opportunities for local companies;	Section 15.4 Appendix E: Section 2.1.6
	▪ Describe education, training, hiring practices that encourage employment of local people, including the use of the Northern Ontario Network of Indigenous Training Organizations (e.g., the Indigenous Skills and Employment Training network);	Section 14.4 Section 15.4
	▪ Describe technology transfer and research and development programs that will facilitate the use of local suppliers of goods and services, local employees, develop new capabilities related to project requirements; and	Not Applicable
	▪ Describe how disproportionate effects that were identified in the GBA+ results were used to inform mitigation and enhancement measures.	Section 14.2.1.3 Section 14.4 Section 15.2.1.2 Section 15.4 Section 17.3.1 Section 17.4 Appendix M
	Where mitigation measures for which there is little experience or for which there is some question as to their effectiveness are proposed to be implemented, the potential risks and effects should those measures not be effective must be clearly and concisely described. In addition, the Impact Statement must identify the extent to which technological innovations may help mitigate effects. Where possible, it will provide detailed information on the nature of these measures, their implementation, management and the requirements of the follow-up program.	Not Applicable (See the following: Section 6.4 Section 7.4 Section 8.4 Section 9.4 Section 10.4 Section 11.4 Section 12.4 Section 13.4 Section 14.4 Section 15.4 Section 16.4 Section 17.4 Section 18.4 Section 19.4 Section 20.4 Appendix E)

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
21	**Residual Effects**	
	After considering the consequences of technically and economically feasible mitigation measures, the Impact Statement must describe any residual environmental, health, social or economic effects of the Project and whether those effects would occur in the local or regional study area. This includes consideration of both positive and negative effects of the Project and input received from the public, Indigenous groups, lifecycle regulators, jurisdictions, federal authorities and other interested parties. If an Indigenous group identifies that there are residual effects to rights or interests, those effects should be carried through for residual effects analysis. Where appropriate, information regarding residual effects should be disaggregated by sex, gender, age and other community relevant identity factors to identify disproportionate residual effects for diverse subgroups as per the GBA+.	Section 6.5, Section 7.5, Section 8.5, Section 9.5, Section 10.5, Section 11.5, Section 12.5, Section 13.5, Section 14.5, Section 15.5, Section 16.5, Section 17.5, Section 18.5, Section 19.2, Section 19.4, Section 19.5, Section 24.4
	Proponents must describe the extent to which residual effects are adverse. Where relevant, or where best practice or evidence-based thresholds exist, effects should be described using criteria to quantify adverse effects. This includes criteria such as whether the effects are high or low in magnitude, the geographical extent, timing, frequency, duration and reversibility of the effects, taking into account any important contextual factors. Where the potential for human health effects exist due to exposure to a particular contaminant at any level (e.g., non-threshold air pollutants, including particulate matter and nitrogen dioxide, and water pollutants, such as but not limited to arsenic and lead) mitigation measures should aim to reduce the residual effects to as low as reasonably achievable.	Section 6.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.6, Section 18.6, Section 19.6, Section 21.3
	In addition, effects should be characterized using language most appropriate for the effect (for example, impacts on the exercise of Aboriginal and Treaty rights and social effects may be described differently from biophysical effects). The description of the effect can be either qualitative or quantitative. It may be more appropriate for other effects to be described using other criteria, such as the nature of the effects, directionality, causation and probability.	Section 6.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.6, Section 18.6, Section 19.6, Section 21.3
	Impacts may affect the communities and stakeholders in different ways, and therefore they may respond differently to them. Characterizing effects should be based largely on the level of concern expressed through engaging with the affected Indigenous groups and community members. There are tools that can assist with these predictions and analyses, including multi-criteria analysis, risk assessment and modelling, in addition to seeking out expert and stakeholder input.	Section 2 Section 3 Sections 6 to 20 (refer to Tables - Consideration of Input from Engagement and Consultation; and Incorporation of Indigenous Knowledge and Land and Resource Use Information)
	The Impact Statement must:	
	▪ Characterize the residual effects using criteria most appropriate for the effect;	Section 6.5, Section 7.5, Section 8.5, Section 9.5, Section 10.5, Section 11.5, Section 12.5, Section 13.5, Section 14.5, Section 15.5, Section 16.5, Section 17.5, Section 18.5, Section 19.2, Section 19.4, Section 19.5, Section 24.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Characterize residual effects for human health using human health-related criteria most appropriate for the carcinogenic and non-carcinogenic health effects of non-threshold contaminants;	Section 17.3
	▪ Where applicable, consideration should be given to the following criteria for residual effects:	
	▫ magnitude;	Section 6.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▫ geographic extent;	Section 6.6, Section 19.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▫ timing;	Section 6.6, Section 8.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 17.5
	▫ duration;	Section 6.6, Section 19.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▫ frequency;	Section 6.6, Section 19.6, Section 7.6, Section 8.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5,
	▫ context;	Section 6.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 16.6, Section 17.5, Section 18.5,
	▫ input from Indigenous peoples;	Section 6.6,
	▫ likelihood;	Section 6.6, Section 19.6, Section 7.6, Section 12.7, Section 8.6, Section 10.6,

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
		Section 11.9, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5,
	▫ reversibility; and	Section 6.6, Section 19.6, Section 7.6, Section 8.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▫ the environmental, health, social and economic context within which potential effects may occur should be taken into account when considering the criteria above.	Section 6.7, Section 19.6, Section 7.7, Section 8.7, Section 9.7, Section 10.7, Section 11.10, Section 12.8, Section 13.7, Section 15.7, Section 16.7, Section 17.7,
	▪ Provide the rationale for the choice of criteria used to determine the extent to which the predicted effects are adverse. The information provided must be clear and sufficient to enable the Agency, review panel, technical and regulatory agencies, Indigenous groups, and the public to review the proponent's analysis of effects;	Section 6.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▪ Describe any differential effects as per GBA+ (e.g., are the effects more severe for some groups than others)	Not Applicable
	▪ Consider the views of the Indigenous groups and the public in assigning the criteria to be used and in characterizing the effects; and	Section 5.2.5, Section 6.6, Section 19.6, Section 7.6, Section 8.6, Section 9.6, Section 10.6, Section 11.9, Section 12.7, Section 13.6, Section 14.6, Section 15.6, Section 16.6, Section 17.5, Section 18.5
	▪ Set out the probability or likelihood of that effect occurring and describe the degree of scientific uncertainty related to the data and methods used within the framework of this analysis.	Section 7.8 Section 12.9 Section 14.8 Section 15.8 Section 16.8 Section 17.8 Appendix H

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
22	**Cumulative Effects Assessment**	
	The proponent must identify and assess the Project's cumulative effects using the approach described in the Agency's guidance documents related to cumulative environmental, health, social and economic effects. If there is an ongoing or completed regional assessment in the proposed project area, the proponent should use the information generated through that process to inform the cumulative effects assessment.	Section 21.3
	Cumulative effects are defined as changes to the environment, health, social and economic conditions, as a result of the Project's residual environmental, health, social and economic effects combined with the existence of other past, present and reasonably foreseeable physical activities, as well as within activities of the Project itself from multiple emissions and discharges (e.g., simultaneous operations) to understand synergistic or additive effects. Cumulative effects may result if:	Section 21
	▪ The implementation of the Project may cause direct residual adverse effects to the valued components , taking into account the application of technically and economically feasible mitigation measures; and	Section 21
	▪ The same valued component may be affected by other past, present and future physical activities.	Section 21
	A cumulative effect on an environmental, health, social or economic component may be important even if the Project's effects to this component by themselves are minor. The tailoring process for developing the Guidelines identifies and prioritizes the list of valued components on which the cumulative effects assessment must focus and also substantiates the rationale for the final selection. Finalizing the choice of valued components and the appropriate boundaries, including potential transboundary areas, to assess cumulative effects, is informed and confirmed as part of the tailoring process through consultation with the public, Indigenous groups, lifecycle regulators, jurisdictions, federal authorities and other interested parties.	Section 21.2
	The cumulative effects assessment must include consideration of cumulative effects to rights of Indigenous peoples and cultures, for all potentially impacted groups including those located in the areas which will be impacted by increased access to the region by exploration and mineral development projects. Both the content and means of presenting this information is to be developed in consultation with each potentially impacted Indigenous group. Proponents must engage with and clearly document and incorporate the views of Indigenous groups in the cumulative effects assessment. Where Indigenous groups do not wish to participate in the cumulative effects assessment with the proponent, the proponent is to share a preliminary draft of the cumulative effects assessment on an Indigenous group's exercise of rights and culture with them in order to receive feedback prior to submitting the Impact Statement to the Agency.	Section 21.4.12 Section 21.3.4 Section 21.2
	The Impact Statement must:	
	▪ Identify and provide a rationale for the valued components that will constitute the focus of the cumulative effects assessment. The selected valued components are those most likely to be affected by the Project in combination with other projects and activities;	Section 21.3.2
	▪ Include a rationale to justify the exclusion of other valued components from the cumulative effects assessment, as applicable;	Section 21.3.2
	▪ Identify and justify the spatial and temporal boundaries for the cumulative effects assessment for each valued components selected. The boundaries for the cumulative effects assessments may differ for each valued component considered and must not be constrained by jurisdictional boundaries:	
	▫ the cumulative effects spatial boundaries will generally be larger than the boundaries for the Project effects alone, and may extend beyond Canada's jurisdiction; and	Section 21.3.2 Section 21.4
	▫ temporal boundaries must include an appropriate baseline and should look at all potential effects throughout the lifecycle of the Project, including decommissioning and abandonment.	Section 21.3.2 Section 21.4
	▪ Assess cumulative effects using a hierarchy, with effects to both local populations and large populations assessed;	Not Applicable
	▪ Describe the methodology used to determine boundaries;	Section 21.3.3
	▪ Until the Agency releases Technical Guidance under IAA, refer to Technical Guidance for Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012, for more guidance on determining spatial boundaries[77]	Section 21.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	[77] Until the Agency releases Technical Guidance under the *Impact Assessment Act*, refer to Technical Guidance of Assessing Cumulative Effects under the *Canadian Environmental Assessment Act, 2012*: https://www.canada.ca/en/impact- assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-ceaa2012.html	
	▪ In relation to caribou: assess cumulative effects to caribou at the scale of the three project study areas (defined above), as well as the implicated Ontario caribou ranges, and the federal Far North caribou range;	Section 13.7
	▪ Identify the sources of potential cumulative effects. Specify other projects or activities that have been or that are likely to be carried out that could cause effects to each selected valued component within the boundaries defined, including potential induced effects, and whose effects would act in combination with the residual effects of the Project. This assessment must consider the results of any relevant regional study conducted. At a minimum, the following projects or activities should be included in the cumulative effects assessment:	Section 21.4
	▫ historical and existing mineral developments (including, but not limited to, Goldcorp's Musselwhite Mine, DeBeers' Victor Mine, Greenstone Gold's Hardrock Mine);	Section 21.3.4
	▫ other historical infrastructure projects;	Section 21.3.4
	▫ the Marten Falls Community Access Road Project and other all-season road projects;	Section 21.3.4
	▫ power transmission projects;	Section 21.3.4
	▫ construction of upgrades to the Anaconda and Painter Lake forestry access roads;	Section 21.3.4
	▫ the construction and operation of the Northern Road Link (road that may link the northern portion of the Marten Falls Community Access Road to the Ring of Fire area);	Section 21.3.4
	▫ transportation of ore from future development near the project for processing, once past the Webequie Supply Road;	Section 21.3.4
	▫ the east-west road;	Section 21.3.4
	▫ forest management units;	Section 21.3.4
	▫ mining activities, including those associated with the following deposits: Eagle's Nest, Black Thor, Black Bird, Big Daddy, Black Label;	Section 21.3.4
	▫ increased winter road traffic during Operations and Maintenance by future mining proponents;	Section 21.3.4
	▫ mineral exploration activity in the area; and	Section 21.3.4
	▫ past projects, including the Ogoki and Long Lac diversions.	Section 21.3.4
	▪ Assess the cumulative effects to each valued component selected by comparing the future scenarios with the Project and without the Project. Effects of past activities (activities that have been carried out) are to be used to contextualize the current state of the valued component. This assessment must also assess the cumulative effects to rights of Indigenous peoples and their cultures, and effects to Ontario's largest caribou range (Missisa);	Section 21.3.4, Section 21.4.12, Section 21.4.8
	▪ Describe the mitigation measures that are technically and economically feasible to eliminate or reduce adverse cumulative environmental, health, social and economic effects. The Impact Statement must:	Section 21
	▫ describe and provide an assessment of the effectiveness of the measures applied to mitigate the cumulative effects;	Section 21.4
	▫ in cases where measures to mitigate these effects are beyond the control of the proponent, the Impact Statement must identify any parties that have the authority to act on these measures. In such cases, the Impact Statement must summarize any commitments by the other parties regarding implementation of the necessary measures and any associated communication plans; and	Section 21.4
	▫ assess the implications of applying project-specific mitigation and enhancement measures within a regional context taking into account all reasonably foreseeable development of the area.	Section 21.4

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe and, where appropriate, quantify the level and severity of the adverse cumulative effects; and	Section 21.4
	▪ Develop a follow-up program to verify the accuracy of the assessment or the effectiveness of mitigation measures for cumulative effects	Section 22.7
23	**Other Effects to Consider**	
23.1	**Effects of Potential Accidents and Malfunctions**	
	The failure of certain works or incidents involving road users caused by technological malfunctions, human error or exceptional natural events (e.g., flooding, earthquake, forest fire) could cause major effects. The proponent must therefore conduct a Hazard Identification and Risk Assessment of accidents and malfunctions across all phases of the Project, determine their potential effects, and present preliminary emergency response measures, systems, and associated response capacities. The Impact Statement must:	Section 23
	▪ Identify, taking into account the lifespan of different project components, and contributing and complicating factors such as weather or external events, potential accidents and malfunctions related to the Project, and the potential for vandalism or sabotage, including an explanation of how those potential events were identified, potential consequences (including the environmental, health, social and economic effects), the plausible worst case scenarios for each major incident type and the unmitigated effects of these scenarios;	Section 23.4
	▪ Plausible accident and malfunction response scenarios should be supported by environmental sensitivity mapping that identifies site-specific conditions and sensitive receptors that are situated adjacent to project activities, including shorelines, streams and wetland areas frequented by fish and/or by migratory birds, as well as likely pathways thereto;	Section 23.4.1
	▪ Worst-case scenarios should account for the timing that coincides:	
	▫ migration periods involving high concentrations of migratory birds;	Section 23.5.1.1, Section 23.5.2.1, Section 23.5.3.1, Section 23.5.4.1
	▫ nesting periods for migratory birds;	Section 23.5.1.1, Section 23.5.2.1, Section 23.5.3.1, Section 23.5.4.1
	▫ spawning periods for fish; and	Section 23.5.1.1, Section 23.5.2.1, Section 23.5.3.1, Section 23.5.4.1
	▫ the presence of sensitive wildlife and/or seasonally-important habitat.	Section 23.5.1.1, Section 23.5.2.1, Section 23.5.3.1, Section 23.5.4.1
	▪ Identify and justify the spatial and temporal boundaries for the effects assessment associated with accidents and malfunctions. The spatial boundaries identified for effects from potential accidents and malfunctions will generally be larger than the boundaries for the Project effects alone;	Section 23.3.2, Section 23.3.2, Sections 6 to 20
	▪ Describe the magnitude and duration of project-related accidents and/or malfunctions, based on the worst-case scenarios and the more-likely but lower-consequence alternative scenarios, including a description of the quantity, mechanism, rate, form and characteristics of the contaminants, greenhouse gases and other materials likely to be released or spilled into the environment during these scenarios and any potentially adverse environmental, health, social or economic effect;	Section 23.4 Section 23.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Describe the preventive measures and design safeguards that will be established to protect against such occurrences and the contingency and emergency response procedures that would be put in place if such events do occur;	Section 23.4.1 Table 23.5
	▪ Describe the expected effectiveness of the response measures and systems;	
	▪ Assess the potential for minor and major accidental spills of fuel, or loss of containment of dangerous goods;	Section 23.4.2, Section 23.5.1
	▪ Where appropriate, provide an analysis of the potential environmental, health, social and economic effects of these discharges on aquatic and terrestrial environments and on human health within spatial boundaries described for the study area;	Section 23.5.1.1, Section 23.5.2.1, Section 23.5.3.1, Section 23.5.4.1
	▪ Describe existing emergency preparedness and response systems and existing arrangements and/or coordination with qualified response organizations in the spatial boundaries associated with the Project;	Section 23.4.1, Table 23.5, Section 23.4.1.1
	▪ Describe exercise and training regimes for emergency response;	Section 23.4.1 Table 23.5
	▪ Identify any critical infrastructure such as local drinking water treatment plants or facilities that may treat water sources impacted by the Project and the capacity of the drinking water treatment plant or facilities to treat water sources impacted by an accidental release from the Project during all project phases;	Not Applicable
	▪ Describe the role of the proponent in the case of spill, collision, grounding or other accidents or malfunctions associated with the Project during all project phases;	Section 23.3 Appendix E
	▪ Detail the equipment that will be available to be deployed to respond to spills;	Section 23.4.1, Table 23.5
	▪ Describe mutual aid agreements in place in the event that the incident exceeds the resources of the proponent and how these resources would be accessed;	Not Applicable
	▪ Describe volunteer management plans;	Not Applicable
	▪ Describe or provide for a waste management plan as it pertains to waste generated during an emergency response;	Section 23.4.1.1, Section 4.6 Appendix E
	▪ Where appropriate, provide details regarding financial liability and compensation in place as required by regulation or company commitment;	Not Applicable
	▪ Describe Emergency Communications Plans that would provide emergency instructions to surrounding communities. Procedures should include a combination of urgent immediate actions, such as public notification of safety issues, shelter-in-place and evacuation directions, as well as longer term actions such as general website and hotlines, incident status updates, injured wildlife reporting, etc. as appropriate. Include a description of efforts that will be taken to invite public feedback on emergency response plans; and	Section 23.5.2
	▪ Eescribe possible mitigation measures to deal with adverse environmental, health, social and economic effects resulting from accidents or malfunctions.	Section 23.4.1 Table 23.5

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
23.2	**Effects of the Environment on the Project**	
	The Impact Statement must consider and describe how environmental conditions, including natural hazards such as severe and/or extreme weather conditions and external events (e.g., earthquakes, flooding, drought, ice events, permafrost conditions, landslides, erosion, subsidence, fire), could adversely affect the Project and how this in turn could result in effects to the environment, health, social and economic conditions. These events are to be considered in different probability patterns (e.g., 5-year flood vs. 100-year flood) with consideration of how these may change under a range of potential future climate scenarios. The focus should be on credible external events that have a reasonable probability of occurrence and for which the resulting environmental effects could be major without careful management. The Impact Statement should also consider how effects of the environment on the Project could have positive effects to the environment, health, social and economic conditions. The Impact Statement must:	Section 24
	▪ Provide details of planning, design and construction strategies intended to minimize the potential adverse effects of the environment on the Project;	Section 24.1.1 Section 4.2.1
	▪ Identify any areas of potential wind or water erosion, slumps and slope instability, geologic hazards, including but not limited to those caused by geologic movements;	Section 24.2.5 Section 6.2.2.4
	▪ Describe any mitigation measures that can be implemented in anticipation or in preparation for effects of the environment on the Project;	Section 24.1.5 Section 24.4 Appendix I
	▪ Describe possible mitigation measures to deal with adverse environmental, health, social and economic effects resulting from effects of the environment on the Project;	Section 24.4 Appendix I
	▪ Identify the Project's sensitivities/vulnerabilities to change in climate (both in mean conditions and extremes such as short-duration heavy precipitation events), describe climate resilience of the Project and how climate change effects have been incorporated into the Project design (e.g., water crossings) and planning over the lifetime of the Project and describe the climate data, projections used, and related information used to evaluate these sensitivities (i.e., risks) over the full project lifetime;	Appendix I
	▪ Describe any identified trends in meteorological events, weather patterns, or physical changes to the environment that are anticipated to result from climate change (for example, changes to annual freeze-thaw cycles, water levels, break-up season and spring freshet), and incorporate this information in a risk assessment as contributing and complicating factors for possible accidents and malfunctions. Provide mitigation measures (both passive and active) that the proponent is prepared to undertake in order to minimize the frequency, severity and consequences of such projected effects;	Section 24.2, Section 23, Appendix I
	▪ When describing possible effects from climate change on the Project, describe how considerations from Indigenous peoples on climate change may impact the Project were considered; and	Section 24.1.3 Section 24.1.4 Appendix II
	▪ Describe measures to enhance positive environmental, health, social and economic effects resulting from effects of the environment on the Project.	Section 24.4 Section 24.8 Appendix E
	Additional guidance related to conducting climate change resilience assessments is included in the Strategic Assessment of Climate Change[78] developed by Environment and Climate Change Canada. [78] A draft version is available at: https://www.strategicassessmentclimatechange.ca/. The final version is expected in early 2020.	Section 25 Appendix H Appendix I

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
24.	**Canada's Ability to Meet its Environmental Obligations and its Climate Change Commitments**	
	The Government of Canada, through IAA, recognizes that the impact assessment contributes to Canada's understanding and ability to meet, first, its environmental obligations, and second, its commitments in respect of climate change.	Section 25
	To inform the factors to consider described in paragraph 22(1)(i) of IAA, the Impact Statement should describe the effects of the Project in the context of environmental obligations, with a focus on Government of Canada obligations and commitments relevant to decision-making. For support on this section, the proponent should refer to Agency guidance on this topic[79]. [79] https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/considering-environmental-obligations.html	Section 25
	Relevant federal environmental obligations identified for this project include the:	
	(1) Convention on Biological Diversity and Canada's supporting national framework (e.g., Canadian Biodiversity Strategy, Canada's Biodiversity Outcomes Framework and current Biodiversity Goals and Targets for Canada); and, legislation that supports the implementation of Canada's biodiversity commitments including the *Species at Risk Act (2002)*, and the *Canada Wildlife Act, (1985*), as well as supporting guidance.	Section 25.1.1
	a. Recovery Strategies and Action Plans developed under the *Species at Risk Act* (SARA) for all species at risk potentially affected by the Project. Of particular importance under SARA for this Project is the "2019 Proposed Amended Recovery Strategy for Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada" Far North range, and smaller ranges within that range as identified by the Province of Ontario.	Section 25.1.2
	(2) Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar), as implemented in part through the *Federal Policy on Wetland Conservation* (1991)[80] and supporting guidance such as the North American Waterfowl Management Plan. [80] http://publications.gc.ca/collections/Collection/CW66-116-1991E.pdf	Section 25.1.3
	(3) Convention for the Protection of Migratory Birds in the United States and Canada, as implemented in part through the Migratory Birds Convention Act (1994), and supporting guidance on conservation objectives arising from Bird Conservation Region Strategies.	Section 25.1.4
	When taking into consideration the list above, the Impact Statement should describe:	
	a) how the Project's effects (including contribution to cumulative effects) may contribute to Canada's ability to meet its obligations (e.g., related to biodiversity); and	Section 25.3
	b) how the Project's effects (including contribution to cumulative effects) may hinder Canada's ability to meet its obligations.	Section 25.3
	Where the Project may contribute to Canada's ability to meet these obligations/commitments, the Impact Statement should describe plans and commitments to ensure that positive contributions are met. Likewise, where the Project may hinder Canada's ability to meet these obligations/commitments, the Impact Statement should describe how the Project commits to first try to avoid and then to mitigate these potential effects, including management plans, risk assessments, and relevant follow-up and monitoring activities. Where relevant, the Impact Statement should include expected indicators and data collection methods to support the plans outlined above.	Section 25.3
	In addition to presenting the proponent's views, the Impact Statement should include how community and Indigenous knowledge may be incorporated in assessing whether the Project presents a contribution or a hindrance to meeting these obligations/commitments.	Section 25.1.1

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
25	**Description of the Project's Contributions to Sustainability**	
	Sustainability, as defined in IAA, "…means the ability to protect the environment, contribute to the social and economic well-being of the people of Canada and preserve their health in a manner that benefits present and future generations".	Section 26
	As part of the planning phase, the public, Indigenous groups and stakeholders will be engaged to identify key issues of importance to them. This engagement will help identify the elements that will frame the assessment of the Project's contribution to sustainability. When assessing a Project's contribution to sustainability, proponents should consider those valued components that participants characterize as important. Sustainability is contextual and project dependent; as such, it may be defined differently by communities, or even groups within communities. Furthermore, proponents should also consider valued components:	Section 26.3
	▪ That could experience long-term effects;	Section 26.1
	▪ That may interact with other valued components;	Section 26.1, Section 26.3.2
	▪ That are relevant to Indigenous groups;	Section 26.1, Section 26.4
	▪ That may interact with potential effects of the Project; or	Section 26.1
	▪ That may interact with project activities.	Section 26.1
	The Impact Statement must characterize the Project's contribution to sustainability. The Impact Statement should describe the context of the particular project, including the issues of importance to participants, the diversity of views expressed and the selection of valued components. The Impact Statement should also characterize the Project's contribution to "sustainability", as defined by Indigenous groups, such as "Seven Generations Teachings" and "Seven Generation Stewardship".	Section 26.3.2, Section 26.5
	Once the analysis on potential effects of the Project is conducted, the sustainability principles should be applied:	Section 26.7
	▪ Consider the interconnectedness and interdependence of human-ecological systems;	Section 26.7.1
	▪ Consider the well-being of present and future generations;	Section 26.7.2
	▪ Consider positive effects and reduce adverse effects of the Project; and	Section 26.7.3
	▪ Apply the precautionary principle by considering uncertainty and risk of irreversible harm.	Section 26.7.4
	The Impact Statement must describe how sustainability principles were applied (outlined above) and identify conclusions drawn from this analysis. This summary should be qualitative in nature, but may draw on quantitative data as necessary.	Section 26.7.1, Section 26.7.2, Section 26.7.3, Section 26.7.4
	In addition, the Impact Statement must:	
	▪ Indicate how the planning and design of the Project, in all phases, considers the sustainability principles;	Section 26.5
	▪ Describe the process in selecting the preferred alternative means and alternatives to the Project and how the sustainability principles were considered;	Section 26.6
	▪ Indicate how monitoring, management and reporting systems consider the sustainability principles and attempt to ensure continuous progress towards sustainability;	Section 26.7.2, Section 26.7.3, Section 26.7.4
	▪ Describe the ecological, health, social and economic benefits of the Project to local communities within the study area, potentially affected Indigenous groups, regional, provincial, territorial and/or federal governments; and	Section 26.5
	▪ Describe engagement with potentially affected Indigenous groups and describe measures and commitments to ensuring the sustainability of Indigenous livelihood, traditional use, culture and well-being.	Section 26.3

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
26	**Follow-up Programs**	
	A follow-up program verifies the accuracy of the effects assessment and evaluates the effectiveness of mitigation measures. This information may be used to determine whether additional actions are necessary (adaptive management) to address unanticipated outcomes. Adaptive management is not considered as a mitigation measure; it is a best management practice in environmental management. If the follow-up program indicates that corrective action is required, the proposed approach for managing the action must be identified and implemented. The follow-up program will explain the uncertainty of the effects outcomes and whether it is related to the impact assessment predictions or the effectiveness of mitigation measures.	Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection)
	Follow-up programs are an opportunity to continue engaging with impacted Indigenous groups, and if undertaken collaboratively, can support solutions-oriented approaches to adaptive management through the early identification of issues in follow-up programs and appropriate solutions with Indigenous knowledge. If there is an ongoing or completed regional assessment in the proposed project area, the proponent should use the information generated through that process to inform considerations for a follow up program. Follow-up program timing should take into account future activities that will use project infrastructure.	Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection)
	Considerations for developing a follow-up program for environmental, health, social or economic effects, as applicable, include:	
	▪ Valued components identified during the impact assessment for which residual adverse effects are predicted or uncertain;	Section 22
	▪ The nature of concerns raised by the public and Indigenous groups about the Project;	Section 22.7
	▪ Suggestions from Indigenous groups and local communities regarding the design of, and involvement in, follow-up and monitoring programs;	Section 22.2
	▪ Incorporation of community and Indigenous knowledge;	Section 22.2
	▪ The accuracy of predictions;	Section 22.1
	▪ An evaluation of the effectiveness of mitigation measures;	Section 22.1, 22.7
	▪ The efficacy of new or unproven techniques and technology;	Section 22
	▪ Disproportionate effects highlighted by GBA+;	Section 22
	▪ The nature of cumulative effects;	Section 22.7,
	▪ The nature, scale and complexity of the program;	Section 22, Section 22.1, Section 22.7
	▪ The degree of uncertainty about the effectiveness of proposed mitigation measures;	Section 22.1
	▪ Any technically and economically feasible measures to manage effects if the applied mitigation measures do not work as intended;	Section 22.1
	▪ Whether there was limited scientific knowledge about the effects in the impact assessment;	Section 22
	▪ Which parties will participate in the conduct of the follow-up program and reviewing its results;	Section 22
	▪ The duration of the follow-up program activities, which may vary depending on the valued components assessed and the future activities in the region that will utilize project infrastructure;	Section 22.3, Section 22.7
	▪ Any existing follow-up or monitoring programs relevant to the proposed Project;	Section 22.7
	▪ How the results of the follow-up program will be shared with interested parties; and	Section 22.2
	▪ Triggers for adaptive management of any unacceptable or unexpected results.	Section 22
	Monitoring is a key component of effective follow-up programs. Monitoring can identify the potential for environmental, health, social or economic degradation during all phases of project development.	

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
26.1	**Follow-up Program Framework**	
	The duration of the follow-up program shall be as long as required to verify the accuracy of the environmental, health, social and economic effects predicted during the impact assessment and to evaluate the effectiveness of the mitigation measures. The Impact Statement must present a follow-up program that includes:	Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection)
	▪ Objectives of the follow-up program and the valued components targeted by the program;	Section 22.1
	▪ List of elements requiring follow-up;	Section 22.7
	▪ Number of follow-up studies planned, as well as their main characteristics (list of parameters to be measured, planned implementation timetable, etc.);	Section 22.7
	▪ Intervention mechanism used in the event that an unexpected deterioration of the environment or impacts on the exercise of rights of Indigenous peoples and cultures is observed or experienced;	Section 22
	▪ Mechanism to disseminate follow-up results among the concerned interested parties;	Section 22.1
	▪ A description of how the monitoring results will be used to trigger the proponent's intervention mechanisms for effects that do not have compliance-based thresholds (e.g., CAAQS for common air pollutants);	Section 22 Section 9.4 Appendix G
	▪ Accessibility and sharing of data for the general population;	Section 22.1
	▪ Opportunity for the proponent to include the participation of Indigenous groups and stakeholders on the affected territory during the development and implementation of the program; and	Section 22.1
	▪ Involvement of local and regional Indigenous organizations in the follow-up program design and implementation, evaluation of the follow-up results, as well as any updates, including a communication mechanism between these organizations and the proponent.	Section 22.2
26.2	**Follow-up Program Monitoring**	
	The Impact Statement must describe the environmental, health, social and economic monitoring to be established, as part of the follow-up program.	
	Specifically, the Impact Statement must present an outline of the preliminary environmental, health, social and economic monitoring program, including, but not limited to the:	
	▪ Identification of the monitoring activities that pose risks to the environmental, health, social and economic conditions and/or valued components and the measures and means planned to protect these conditions;	Section 11.13 Appendix K.4 Section 22
	▪ Identification of regulatory instruments that include a monitoring requirement for the valued components;	Section 22.7
	▪ Identification of opportunities for participation of representatives from Indigenous groups identified in the Indigenous Engagement and Partnership Plan in monitoring programs;	Section 22.2
	▪ Identification of those positions accountable and responsible for monitoring and ensuring compliance;	Section 22.2
	▪ Description of the methodology for tracking environmental, health, social and economic issues, including how these methodologies were informed by community and Indigenous knowledge or specifically impacted subgroups;	Section 22.7
	▪ Similar guidance and methodologies should be applied to follow up monitoring as are applied to establishing baseline conditions;	Section 11.13 Appendix K-4 Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection) Section 22

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Post construction monitoring surveys should be undertaken for:	
	▫ ongoing monitoring of Project and control sites to evaluate whether there are changes in the bat valued component communities following project construction; and	Section 22.7
	▫ evaluating the effectiveness of applied mitigation.	Section 22
	▪ Description of the methodology and mechanism for monitoring the effectiveness of mitigation and reclamation;	Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection)
	▪ In relation to wetlands:	Section 11.4 Section 11.13 Appendix K-4 Section 22.7
	▫ if reclamation plantings are created, monitor the plantings biannually (i.e., late spring and fall) during consecutive years, and undertake supplementary planting, as necessary, until the vegetation cover becomes established and continues to grow without further intervention; and	Section 11.13 Appendix K-4 Section 1.3.1 of Appendix K-3
	▫ monitor post-construction effects to wetland functions. A program to monitor wetland functions should be designed in such a way as to ensure that the type and amount of each wetland function would be considered individually in determining recovery success and that each wetland function would be recovered to at least the same type and amount of function as assessed during baseline.	Section 11.13 Appendix K-4
	▪ In relation to caribou:	
	▫ monitor effects on boreal caribou and their critical habitat to verify impact assessment predictions, ensure that mitigation measures are effective, and determine whether any unanticipated effects are occurring within the Project area;	Section 13.10
	▫ monitoring methods should follow standardized/established methods and include a robust before-after-control-impact design (or similar field-based approach) to allow for quantitative assessment of potential effects of the Project and identify any adaptive management that may be necessary;	Section 13.10
	▫ the methodology provided should include the monitoring schedule;	Section 22 Sections 6 to 20 (refer to follow-up monitoring subsection)
	▫ the methodology should include a description of the performance indicators that will be used to evaluate the effectiveness of the mitigation measures; and	Section 13.2
	▫ identify circumstances and mechanisms under which corrective/adaptive measures may be implemented to address any issue or problem identified through the follow-up programs or environmental monitoring. For example, if unanticipated effects occur or the effects are greater than anticipated;	Section 13.10.3
	▪ Description of the characteristics of monitoring where foreseeable (e.g., location of interventions, planned protocols, list of measured parameters, analytical methods employed, schedule, human and financial resources required);	Section 22.7
	▪ Description of the proponent's intervention mechanisms in the event of the observation of non-compliance with the legal and environmental requirements or with the obligations imposed on contractors by the provisions of their contracts;	Section 22.7
	▪ A description of how the monitoring results will be used to trigger the proponent's intervention mechanisms for effects that do not have compliance-based thresholds (e.g., CAAQS for common air pollutants);	Section 22 Section 9.4 Appendix G

TISG Section	TISG Requirements	EAR/IS Section Where Requirement is Addressed
	▪ Guidelines for preparing monitoring reports (number, timing, content, frequency, format, duration, geographic extent) that will be sent to the authorities involved;	Sections 22.7 and 22.8
	▪ Plans, including funding options, to involve Indigenous groups and local communities in monitoring, where appropriate; and	Sections 22.7 and 22.2
	▪ Quality assurance and quality control measures to be applied to monitoring programs.	Section 22
27	**Assessment Summary**	
	The proponent must prepare a stand-alone plain language summary of the Impact Statement in both of Canada's official languages (French and English). The summary must contain sufficient details for the reader to understand the Project, any potential environmental, health, social and economic effects, potential adverse impacts on the exercise of rights Indigenous peoples, proposed mitigation measures, residual effects and any required follow-up programs.	Executive Summary (English version) Executive Summary (French version)
	The Assessment Summary provides an opportunity for the proponent to demonstrate correspondence between issues raised during the planning phase and issues addressed in the assessment. This Assessment Summary should be presented by valued component, which allows the proponent to demonstrate the completeness of the assessment and provide the results of the analysis. The summary must include key maps or figures illustrating the Project location and key project components and will include locations of townships and municipalities, Indigenous communities, traditional territories and Treaty areas.	Executive Summary
Appendix 1	**Resources and Guidance** The proponent should follow guidance prepared under IAA or, where not available, to follow guidance developed under the *Canadian Environmental Assessment Act, 2012*.	Section 6, Section 7, Section 8, Section 9, Section 10, Section 11, Section 12, Section 13, Section 14, Section 15, Section 16, Section 18