

Appendix D

Draft List of Net Effects Assessment Criteria and Indicators





The draft list of criteria and indicators provided below will be used for the net effects assessment of the preferred route in the environmental assessment. This list is preliminary, and engagement sessions will be held to request further feedback on this list from Indigenous communities, government officials and agencies, and interested persons and organizations.

Natural Environment

Draft List of Net Effects Assessment Criteria and Indicators				
Valued Component	Criteria	Indicator(s) ⁽¹⁾	Rationale for Selection	Possible Data Source(s)
Physiography, Geology, Surficial Geology and Soils	Soil Productivity and Quality	<ul style="list-style-type: none"> Change to areal extent of productive soil within the Project Footprint Change in soil capability and soil quality 	<ul style="list-style-type: none"> Avoid or minimize loss of, and adverse effects to, productive soils Avoid or minimize incompatibilities with existing agricultural operations Avoid or minimize potential to encounter or disperse contaminated soils given the importance to ecosystem diversity and interrelation with other components (e.g., groundwater, vegetation). 	<ul style="list-style-type: none"> Desktop review including technical and background reports GIS and Land Information Ontario (LIO) database and mapping Canada Land Inventory Ministry of Agriculture, Food and Rural Affairs (MAFRA) Ecolog Environmental Risk Information Services (ERIS) Local municipalities Local commerce organizations/businesses



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Valued Component	Criteria	Indicator(s)⁽¹⁾	Rationale for Selection	Possible Data Source(s)
Surface water	Surface Water Quality and Quantity	<ul style="list-style-type: none"> • Change to surface water quantity and flows considering: <ul style="list-style-type: none"> - Types and timing of watercourse crossings to be used or constructed - Surface water withdrawal volumes during construction - Stream flows - Water Levels - Cross-sections hydraulics - Erosion-sedimentation processes - Drainage patterns • Change to surface water quality considering: <ul style="list-style-type: none"> - Types and timing of watercourse crossings to be used or constructed - Total suspended solids loading - Water chemistry - Water temperature 	<ul style="list-style-type: none"> • Avoid or minimize impacts to surface water quality and quantity, which may: <ul style="list-style-type: none"> - Form part of provincially designated features - Provide habitat for aquatic species - Provide potable/non-potable water supply 	<ul style="list-style-type: none"> • Desktop review including technical and background reports • Environment and Climate Change Canada (ECCC) Water Survey of Canada • Geographic Information Systems (GIS) and LIO database and mapping • Ministry of Natural Resources and Forestry (MNRF) • Lakehead Region Conservation Authority • Local municipalities • Field survey
Groundwater	Groundwater Quality and Quantity	<ul style="list-style-type: none"> • Change in groundwater quality, levels and flow considering: 	<ul style="list-style-type: none"> • Avoid or minimize impacts to groundwater quality and quantity, which may: 	<ul style="list-style-type: none"> • Desktop review including technical and background reports



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Valued Component	Criteria	Indicator(s)⁽¹⁾	Rationale for Selection	Possible Data Source(s)
		<ul style="list-style-type: none"> - Numbers, depths, and proximity of water wells in the study area - Anticipated groundwater withdrawal and discharge during construction 	<ul style="list-style-type: none"> - Be a source of potable and non-potable water supply - Provide baseflow to surface water features 	<ul style="list-style-type: none"> • Environment Canada’s Water Survey of Canada • GIS and LIO database and mapping • Ministry of Environment, Conservation and Parks (MECP) water well records • Local municipalities
Provincial Parks, Conservation Reserves, Areas of Natural and Scientific Interest and Other Protected Areas	Provincial Parks, Conservation Reserves, and Areas of Natural and Scientific Interest	<ul style="list-style-type: none"> • Change in protected areas including: <ul style="list-style-type: none"> - Provincial parks and provincial nature reserves in the Project Footprint - Conservation reserves in the Project Footprint - Natural and Scientific Interest (Earth and Life Science), including candidate areas, in the Project Footprint - Other Ecologically Sensitive Areas in the Project Footprint 	<ul style="list-style-type: none"> • Avoid or minimize adverse effects to provincially designated areas • Protect critical landform/vegetation within designated areas 	<ul style="list-style-type: none"> • Desktop review including technical and background reports • GIS and LIO database and mapping • MECP • MNRF • Provincial Park and Conservation Reserve Management Plans and Management Statements • Area of Natural and Scientific Interest (ANSI) Reports



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Valued Component	Criteria	Indicator(s)⁽¹⁾	Rationale for Selection	Possible Data Source(s)
	Federally Protected Areas	<ul style="list-style-type: none"> Change in federally protected areas including: <ul style="list-style-type: none"> - Area (ha) of national wildlife areas in the Project Footprint 	<ul style="list-style-type: none"> Avoid or minimize adverse effects to federally designated areas 	<ul style="list-style-type: none"> Desktop review including technical and background reports GIS and LIO database and mapping ECCC
Vegetation and Wetlands	Vegetation Communities, including Wetlands Examples of specific criteria: <ul style="list-style-type: none"> Upland ecosystems Riparian ecosystems Wetland ecosystems Wild rice 	<ul style="list-style-type: none"> Ecosystem quantity: Anticipated changes to area (ha) of vegetation communities in the Project Footprint, by type as appropriate (e.g., bog, fen, swamp wetlands) Ecosystem distribution: Anticipated changes to spatial configuration of vegetation communities (e.g., fragmentation) in the study area Ecosystem condition: Anticipated changes to the integrity or naturalness of vegetation communities in the study area, including their ability to support the communities of organisms naturally associated with them 	<ul style="list-style-type: none"> Avoid or minimize adverse effects to vegetation communities, and specifically to: <ul style="list-style-type: none"> - Underrepresented landform/vegetation values - Vegetation significant wildlife habitat (SWH) - Sensitive vegetation features - Provincially Significant Wetlands 	<ul style="list-style-type: none"> Desktop review including technical and background reports GIS and LIO database and mapping MNRF Local municipalities Lakehead Region Conservation Authority Forest Management Plans and inventory mapping GapTool data IK Field Studies

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Valued Component	Criteria	Indicator(s)⁽¹⁾	Rationale for Selection	Possible Data Source(s)
	Plant Species at Risk or Species of Conservation Concern and Related Habitat	<ul style="list-style-type: none"> Habitat quantity: Anticipated changes to amount (ha) of mapped suitable habitat with high potential to support plant Species at Risk or species of special concern in the study area Habitat distribution: Anticipated changes to spatial configuration of habitat in the study area, including the effects on plant dispersal and population distribution Survival and reproduction: Anticipated changes to plant Species at Risk or species of special concern populations (i.e., abundance) through changes in survival and recruitment, as well as changes in the number of documented occurrences of plant Species at Risk or species of special concern in the study area 	<ul style="list-style-type: none"> Avoid or minimize adverse effects to vegetation Species at Risk or species of special concern and/or habitat Legal protections for Species at Risk 	<ul style="list-style-type: none"> Desktop review including technical and background reports GIS and LIO database and mapping MNRF MECP ECCC's Species at Risk databases Species at Risk Status Reports and Recovery Strategies Natural Heritage Information Centre (NHIC) iNaturalist data IK Field studies
Wildlife and Wildlife Habitat	Wildlife and Wildlife Habitat Examples of species or taxa-specific criteria:	<ul style="list-style-type: none"> Habitat quantity: Anticipated changes to amount (ha) of wildlife habitat in the study area. 	<ul style="list-style-type: none"> Avoid or minimize adverse effects to wildlife and wildlife habitat 	<ul style="list-style-type: none"> Desktop review including technical and background reports



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	<ul style="list-style-type: none"> • Ungulates (e.g., moose) • Furbearers (e.g., pine marten, beaver, lynx, black bear) • Raptors (e.g., bald eagle) • Songbirds (e.g., Nashville warbler, white throated sparrow, red eyed vireo) • Herpetofauna (e.g., snapping turtle, northern leopard frog) • Other Species of Conservation Concern 	<ul style="list-style-type: none"> • Habitat distribution: Anticipated changes to spatial configuration of habitat in the study area, including the effects on wildlife movement and habitat connectivity • Survival and recruitment: Anticipated changes to wildlife populations through changes in survival and recruitment.⁽²⁾ 		<ul style="list-style-type: none"> • GIS and LIO database and mapping • MNRF • MECP • Forest Management Plans • NHIC • iNaturalist data • eBird data • Ontario Breeding Bird Atlas (OBBA) • IK • Field studies
Wildlife and Wildlife Habitat (Species at Risk)	Little Brown Myotis and Northern Myotis	<ul style="list-style-type: none"> • Habitat quantity: Anticipated changes to amount (ha) of SAR critical habitat in the study area. • Habitat distribution: Anticipated changes to spatial 	<ul style="list-style-type: none"> • Legal protections for Species at Risk 	<ul style="list-style-type: none"> • Desktop review including technical and background reports • GIS and LIO database and mapping
	Eastern whip-poor-will			
	Barn swallow			



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	<ul style="list-style-type: none"> Bank swallow Bobolink Chimney swift American white pelican Least bittern American Badger Gray fox Olive-sided flycatcher Canada warbler 	<ul style="list-style-type: none"> configuration of critical habitat in the study area, including the effects on movement corridors and habitat connectivity • Survival and recruitment: Anticipated changes to SAR populations through changes in survival and recruitment.⁽²⁾ 		<ul style="list-style-type: none"> • MNRF • MECP • ECCC’s Species at Risk databases • Species at Risk Status Reports and Recovery Strategies • Forest Management Plans • NHIC • iNaturalist data • eBird data • OBBA • IK • Field studies
Fish and Fish Habitat	<p>Fish and Fish Habitat</p> <p>Examples of species endemic to northwestern Ontario or taxa-specific criteria:</p>	<ul style="list-style-type: none"> • Habitat quantity: Anticipated changes to the amount (ha) of fish habitat identified in the study area • Habitat quality: Anticipated changes (qualitative) to the type and condition of habitat available for various life history stages of fish 	<ul style="list-style-type: none"> • Avoid or minimize adverse effects to fish and fish habitat 	<ul style="list-style-type: none"> • Desktop review including technical and background reports and literature • GIS and LIO database and mapping • MNRF (Fish ON-Line and information request) • NHIC

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Valued Component	Criteria	Indicator(s) ⁽¹⁾	Rationale for Selection	Possible Data Source(s)
	<ul style="list-style-type: none"> - Northern Pike - Walleye - Lake Trout - Brook Trout 	<ul style="list-style-type: none"> • Survival and reproduction: anticipated changes (qualitative) to a fish population as a result of altering survival and reproduction • Distribution and connectivity: Anticipated changes (qualitative) to habitat availability, including the effects on fish movement and habitat connectivity. 		<ul style="list-style-type: none"> • MECP • Fisheries and Oceans Canada (DFO) • Royal Ontario Museum (ROM) fish database • Lakehead Region Conservation Authority • Forest Management Plans • Field studies • IK • Status Reports and Recovery Strategies • Fisheries Management Zone plans and regulations
Fish and Fish Habitat (Species at Risk)	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	<ul style="list-style-type: none"> • Habitat quantity: Anticipated changes to the amount (ha) of fish habitat identified in the study area • Habitat quality: Anticipated changes (qualitative) to the type and condition of habitat available for various life history stages of fish • Survival and reproduction: anticipated changes 	Legal protections for Species at Risk	<ul style="list-style-type: none"> • Desktop review including technical and background reports and literature • GIS and LIO database and mapping • MNRF (Fish ON-Line and information request) • NHIC



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	Lake Sturgeon (Nelson River population)	(qualitative) to a fish population as a result of altering survival and reproduction <ul style="list-style-type: none"> Distribution and connectivity: Anticipated changes (qualitative) to habitat availability, including the effects on fish movement and habitat connectivity 		<ul style="list-style-type: none"> ECCC's Species at Risk databases MECP Fisheries and Oceans Canada (DFO) Royal Ontario Museum (ROM) fish database Lakehead Region Conservation Authority Forest Management Plans Field studies IK Status Reports and Recovery Strategies Fisheries Management Zone plans and regulations
	American Eel			
Air Quality	Air Emissions	Change to ambient criteria air contaminants (CAC) and fugitive dust emissions in the study area	May affect nearby residents and/or other sensitive land uses	<ul style="list-style-type: none"> ECCC MECP Local municipalities
	Greenhouse Gas (GHG) Emissions	Change to GHG emissions in the study area	May contribute to climate change	<ul style="list-style-type: none"> ECCC MECP



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Acoustics	Acoustics	Change to noise levels in the study area	<ul style="list-style-type: none"> • May affect nearby noise-sensitive wildlife, human occupancy and land use • To consider compliance with Ontario Hydro Protocol for Community Noise Control dated January 7, 1981 	<ul style="list-style-type: none"> • MECP • Ontario Hydro Protocol • Health Canada • Local municipalities



Socio-Economic Environment

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Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
Provincial and Municipal Land Use Policy	Land Use Planning	<ul style="list-style-type: none"> • Presence of lands designated for recreational, residential, institutional or commercial purposes in the Project Footprint • Proximity to planned developments (ha) in the study area (development applications) • Need for amendments to existing land use policy to accommodate the Project Footprint • Ability to conform with local and provincial land use policies 	<ul style="list-style-type: none"> • Enhance planning by conforming with provincial policy and official plans • Avoid or minimize land use conflicts and incompatibilities with existing and planned land uses 	<ul style="list-style-type: none"> • Ministry of Municipal Affairs and Housing (MMAH) • Official Plans • Local municipalities - Interviews with municipal representatives • Local commerce organizations • Local businesses • Crown Land Use Policy Atlas
	Provincial Parks	Ability to conform with the policy direction and maintain the objectives of the provincial parks crossed by the Project Footprint	<ul style="list-style-type: none"> • Protection of existing park values and activities • Provincially designated feature 	<ul style="list-style-type: none"> • Desktop review including technical and background reports including: <ul style="list-style-type: none"> - Crown Land Use Policy Atlas - Protected area management plans and management statements • GIS and LIO database and mapping • MNRF • MECP, Ontario Parks • iNaturalist



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Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
				<ul style="list-style-type: none"> • Surveys/interviews with Parks managers and user groups
	Conservation Reserves	Ability to conform with the policy direction and maintain the objectives of the conservation reserves crossed by the Project Footprint	<ul style="list-style-type: none"> • Protection of existing conservation reserve values and activities • Provincially designated feature 	<ul style="list-style-type: none"> • Desktop review including technical and background reports, including: <ul style="list-style-type: none"> - Crown Land Use Policy Atlas - Conservation reserve management statements • GIS and LIO database and mapping • MNRF • MECP, Ontario Parks • iNaturalist
	Enhanced Management Areas	Ability to maintain the objectives of enhanced management areas in the Project Footprint	Protection of existing values and activities	<ul style="list-style-type: none"> • Desktop review including technical and background reports including: <ul style="list-style-type: none"> - Crown Land Use Policy Atlas - Approved Forest Management Plans and Annual Work Schedules • Applicable elements of park/reserve management plans and/or statements • GIS and LIO database and mapping • MNRF • MECP, Ontario Parks • Sustainable Forest License holders • iNaturalist
Community Well-being	Population and Demographics	<ul style="list-style-type: none"> • Change to population and demographics considering: 	<ul style="list-style-type: none"> • Enhance planning by identifying potential opportunities local 	<ul style="list-style-type: none"> • Statistics Canada • MMAH • Official plans



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Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
		<ul style="list-style-type: none"> - Population and demographics of the settlements in the study area - Size, location, and duration of anticipated workforce - Location and availability of accommodation for the workforce 	<ul style="list-style-type: none"> populations and accommodations • Avoid or minimize adverse effects to populated areas 	<ul style="list-style-type: none"> • Local municipalities • Accommodation websites
	Quality of Life	<ul style="list-style-type: none"> • Change to quality of life considering: <ul style="list-style-type: none"> - Proximity to settlements and built-up areas within the study area - Location of nearby points of reception to the Project Footprint - Nature of anticipated nuisance-related concerns (e.g., noise, vibration, traffic, access) from activities in the Project Footprint 	<ul style="list-style-type: none"> • Enhance planning by identifying potential opportunities for local populations • Avoid or minimize adverse effects to populated areas, dwellings and sensitive points of reception (e.g., residents or recreational users) 	<ul style="list-style-type: none"> • Statistics Canada • MMAH • Official plans • Local municipalities • Applicable data sources from Ontario’s data catalogue (https://geohub.lio.gov.on.ca/) • Results from the net effects assessment of the Natural Environment features • Stakeholder consultation and Indigenous engagement



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Employment and Economy	Labour Force and Local Economy	<ul style="list-style-type: none"> • Potential for local and regional employment opportunities • Potential for procurement of project materials and services from local businesses and contractors 	<ul style="list-style-type: none"> • Enhance planning to maximize positive economic effects • Avoid or minimize adverse effects to employment and the economy 	<ul style="list-style-type: none"> • Project description • Desktop research and secondary source information • Stakeholder consultation and Indigenous engagement
	Local Government Finances	<ul style="list-style-type: none"> • Expected local government revenues • Expected local government expenditures 	<ul style="list-style-type: none"> • Enhance planning to maximize positive economic effects • Avoid or minimize adverse effects relating to local government revenue, taxes and expenditures 	<ul style="list-style-type: none"> • Municipal financial reports • Hydro One
Resource Use	Mining Resource Use	<ul style="list-style-type: none"> • Change in access of mining resources considering: <ul style="list-style-type: none"> - Proximity to mining claims in the study area - Proximity to active and planned mines, and associated infrastructure (i.e., mine access roads), in the study area 	<ul style="list-style-type: none"> • Protect and maintain access for significant exploration and mining activities • Abandoned mines could pose human health and/or constructability issues, as well as wildlife habitat 	<ul style="list-style-type: none"> • Desktop review including technical and background reports • GIS database and mapping • Local commerce organizations • Ministry of Energy, Northern Development and Mines (ENDM) • MNRF • Mining companies • Ontario Geospatial Data Exchange (OGDE) data sources:



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		<ul style="list-style-type: none"> - Proximity of inactive (abandoned) mines in the study area 		<ul style="list-style-type: none"> - Crown Dispositions (land use permits, leases, easements, etc.) • Patent Land External
	Aggregate Resources	<ul style="list-style-type: none"> • Change in availability of aggregate resources in the study area considering: <ul style="list-style-type: none"> - Proximity to aggregate pits and associated infrastructure (e.g., access roads) in the study area - Area (ha) of high potential for aggregate resources in the Project Footprint - Anticipated volume and sources of aggregate required for the Project 	<ul style="list-style-type: none"> • Enhance planning by identifying active aggregate sources local to the Project • Protect and maintain access to significant aggregate activities 	<ul style="list-style-type: none"> • Desktop review including technical and background reports • GIS database and mapping • ENDM • MNRF • Local municipalities • Data sources from Ontario’s data catalogue (https://geohub.lio.gov.on.ca/): <ul style="list-style-type: none"> - Aggregate Site Authorized – Inactive - Ministry of Transportation Aggregate Sites • OGDE data sources: <ul style="list-style-type: none"> - Crown Dispositions (land use permits, leases, easements, etc.) - Patent Land External
	Hunting, Trapping and Fishing	<ul style="list-style-type: none"> • Changes to hunting, trapping and fishing in the study area considering: <ul style="list-style-type: none"> - Wildlife Management Units 	Avoid or minimize adverse effects to resource harvesting, which is a common practice for Indigenous and non-Indigenous peoples in the region	<ul style="list-style-type: none"> • Desktop review including technical and background reports • GIS database and mapping • Local organizations • MNRF • IK studies



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		<ul style="list-style-type: none"> crossed by the Project Footprint - Proximity to traplines in the study area - Number and types of hunting licenses in the study area - Waterbody features used for recreational fishing in the Project Footprint 		<ul style="list-style-type: none"> • Stakeholder consultation and Indigenous engagement • OGDE data sources: <ul style="list-style-type: none"> - Crown Dispositions (land use permits, leases, easements, etc.) • Patent Land External
	Recreation and Commercial Tourism	<ul style="list-style-type: none"> • Change to recreation and commercial tourism considering: <ul style="list-style-type: none"> - Proximity to outpost camps in the study area - Proximity to areas of concern (AOC) associated with tourism and recreation in the study area - Proximity to cabins and cottages in the study area - Proximity to recreational trails 	Avoid or minimize adverse effects and disturbances to: <ul style="list-style-type: none"> • Tourism related businesses and activities • Recreational and tourism-related AOCs and related activities • Recreational cabins and cottages, and related activities/land uses • Recreational trails and related activities, including access points for recreational 	<ul style="list-style-type: none"> • Local municipalities • Local commerce organizations • Local business and/or organizations • Forest Management Plans, including ACOs and associated prescriptions • GIS and LIO database and mapping • Data sources from Ontario’s data catalogue (https://geohub.lio.gov.on.ca/): <ul style="list-style-type: none"> - Ontario Trail Network (recreation features) - Trail segments (recreation features) • Fishing access points (recreation features) • Stakeholder consultation and Indigenous engagement



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		<ul style="list-style-type: none"> and access points in the study area - Proximity to other recreational features, including canoe routes, backcountry campsites, shore launch sites, boat launches in the study area - Proximity to campgrounds in the study area - Proximity to golf courses in the study area 	<p>activities (e.g., trail heads, fishing access points, etc.)</p> <ul style="list-style-type: none"> • Campgrounds and/or users • Golf courses and users • Other recreational features 	
	Navigation	<ul style="list-style-type: none"> • Change to navigation considering: <ul style="list-style-type: none"> - Navigable watercourses crossed by the Project Footprint - Types and timing of watercourse crossings to be used or constructed 	Avoid or minimize interference with navigation and navigation safety	<ul style="list-style-type: none"> • Desktop review • GIS and LIO database and mapping • Local municipalities and conservation authority • Stakeholder consultation and Indigenous engagement • Field study for surface water • Results from the net effects assessment for Surface Water



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Infrastructure and Community Services	Transportation and Energy Infrastructure	<ul style="list-style-type: none"> • Change in transportation and energy infrastructure considering: <ul style="list-style-type: none"> - Proximity to transmission lines, pipelines and other utilities in the study area - Proximity to roads, highways, rail lines and airports in the study area - Distance and condition of existing access roads available for use - Capacity of local infrastructure 	<ul style="list-style-type: none"> • Maximize use of existing access roads and infrastructure • Maximize benefits of providing new energy infrastructure • Avoid or minimize adverse effects to existing infrastructure and facilities 	<ul style="list-style-type: none"> • Desktop review • GIS and LIO database and mapping • Applicable safety standards and requirements • Transport Canada
	Community Services and Facilities	<ul style="list-style-type: none"> • Change to community services and facilities considering: <ul style="list-style-type: none"> - Proximity to active, inactive (closed), and proposed (new) waste management facilities in the study area - Proximity to healthcare facilities 	<ul style="list-style-type: none"> • Enhance planning by identifying existing services potentially available for the Project • Avoid or minimize adverse effects to access and operations of community services and facilities 	<ul style="list-style-type: none"> • Ministry of Health • MECP • Official plans • Local municipalities • Local school boards



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		<ul style="list-style-type: none"> in the study area (e.g., hospitals, clinics, etc.) - Proximity to educational facilities in the study area (e.g., schools, colleges, universities, etc.) - Proximity to community-based recreational facilities in the study area (e.g., community centres, libraries, etc.) - Proximity to places of worship in the study area - Capacity of the community services identified in the study area 		
Aesthetics	Visual Landscape (Aesthetics)	<ul style="list-style-type: none"> • Changes to the visual landscape considering: <ul style="list-style-type: none"> - Proximity to mapped or known public scenic viewpoints and visual aesthetics 	Avoid or minimize effects to existing scenic views and visual aesthetic AOCs	<ul style="list-style-type: none"> • Visual management planning objectives from local and regional governments • Heritage advisory organizations • MNRF, LIO



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		<ul style="list-style-type: none"> AOCs in the study area - Anticipated visibility of the Project from key scenic viewpoints and visual aesthetics AOCs in the study area - Visual contrast of the Project relative to the existing landscape from key viewpoints. - Compatibility of the Project with the visual landscape 		<ul style="list-style-type: none"> • Project-related 3D infrastructure modelling data • Available spatial data (e.g., aerial imagery, light detection and ranging (LiDAR) and terrain data). • Engagement with stakeholders, Indigenous communities and public • Photographic inventory
Cultural Heritage Resources	Archaeological resources	<ul style="list-style-type: none"> • Change to archaeological resources considering: <ul style="list-style-type: none"> - Number of archaeological sites in the Project Footprint - Area (ha) of Project Footprint with archaeological potential - Number of archaeological sites 	Identification and protection of significant archaeological resources	<ul style="list-style-type: none"> • Desktop study • Archaeological assessments • Local municipalities • Federal, provincial and municipal heritage databases • Written sources, photographs, historical maps, and aerial imagery • Heritage organizations • Field studies • ENDM • IK



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		where archaeological assessment is completed prior to Project construction		
	Built Heritage Resources and Cultural Heritage Landscapes	<ul style="list-style-type: none"> • Change to Built Heritage Resources & Cultural Heritage Landscapes considering: <ul style="list-style-type: none"> - Proximity of Built Heritage Resources & Cultural Heritage Landscapes identified in the study area - Proximity of known historical cemeteries in the Project Footprint 	Identification and protection of significant cultural resources and historic cemeteries	<ul style="list-style-type: none"> • Desktop study • Cultural heritage assessments • Local municipalities • Federal, provincial and municipal heritage databases • IK • Historical mapping and imagery • Heritage advisory organizations • Field studies
First Nations Rights/Interests and Use of Land and Resources for Traditional Purposes	Traditional Use of Land and Resources	<ul style="list-style-type: none"> • Changes to use of land and resources for traditional purposes considering: <ul style="list-style-type: none"> - Area (ha) of unoccupied Crown land being converted to occupied Crown land 	<ul style="list-style-type: none"> • Avoid or minimize adverse effects to the exercise of Indigenous Rights including land availability and harvesting practices or sites • Criteria and indicators may be 	<ul style="list-style-type: none"> • Indigenous communities • IK studies that are shared with Hydro One • Field studies



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		<ul style="list-style-type: none"> - Availability of harvested resources (considering outcomes of assessments for wildlife, vegetation, fish) - Access (increased or decreased) to preferred harvesting areas (hunting, trapping, fishing and plant harvest) 	adjusted based on ongoing engagement with communities	
	Cultural Landscapes and Intangible Cultural Heritage	<ul style="list-style-type: none"> • Changes to cultural practices considering: <ul style="list-style-type: none"> - Access to culturally sensitive, sacred or spiritual landscapes and sites - Quality of experience/sense of place in areas of use for traditional purposes, including sensory disturbance through Project-related changes to air quality, acoustics 	<ul style="list-style-type: none"> • Avoid or minimize effects to the exercise of Indigenous Rights and expression of cultural practices and values • Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> • Indigenous communities • IK studies that are shared with Hydro One • Archaeology/heritage studies • Visual, Noise and Air Quality impact assessment • Field studies



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Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
		and visual landscape (aesthetics)		
Métis Rights/Interests and Use of Land and Resources	Loss of Land/ Change in Priority Rights	<ul style="list-style-type: none"> Changes in Land Available for Métis Use considering: <ul style="list-style-type: none"> Conversion of unoccupied Crown land to occupied Crown land Increased physical disturbance 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies Field studies
	Harvesting/Sites	<ul style="list-style-type: none"> Changes in physical attributes considering: <ul style="list-style-type: none"> Decrease in air quality Increase in noise Decrease in visual quality Perception of changes in air quality, noise or visual quality Increased avoidance behaviours 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Visual, Air Quality and Noise impact assessment Field studies
		<ul style="list-style-type: none"> Changes to harvesting of culturally critical species considering: 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One



Draft List of Net Effects Assessment Criteria and Indicators

Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
		<ul style="list-style-type: none"> - Displacement of wildlife resulting in reductions to hunting, fishing and trapping - Reduction or change in vegetation resulting in reductions of gathering activities 	<p>expression of cultural practices and values</p> <ul style="list-style-type: none"> • Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> • Field studies
		<ul style="list-style-type: none"> • Changes to harvesting practices considering: <ul style="list-style-type: none"> - Disruption to harvesting timing windows 	<ul style="list-style-type: none"> • Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values • Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> • Métis communities • IK studies that are shared with Hydro One • Field studies
		<ul style="list-style-type: none"> • Changes to access considering: <ul style="list-style-type: none"> - Increased non-Métis access - Decreased Métis access 	<ul style="list-style-type: none"> • Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values • Criteria and indicators may be adjusted based on 	<ul style="list-style-type: none"> • Métis communities • IK studies that are shared with Hydro One



Draft List of Net Effects Assessment Criteria and Indicators				
Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
			ongoing engagement with communities	
		<ul style="list-style-type: none"> Change in teaching/transmittal considering: <ul style="list-style-type: none"> Removal of resources for teaching/transmittal to the next generation Removal of sites for teaching/transmittal to the next generation 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies Visual impact assessment Field studies
		<ul style="list-style-type: none"> Changes in perception of considering: <ul style="list-style-type: none"> Changes in perception of harvesting experience Changes in perception of species Changes in perception of Métis sites 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies Visual impact assessment Field studies
	Cultural Identity	<ul style="list-style-type: none"> Disruption of "sense of place" considering: <ul style="list-style-type: none"> Removal of required conditions for 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies



Draft List of Net Effects Assessment Criteria and Indicators				
Valued Component	Criteria	Indicator(s)	Rationale for Selection	Possible Data Source(s)
		territorial connection for the Métis	<ul style="list-style-type: none"> Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Visual impact assessment Field studies
		<ul style="list-style-type: none"> Reduction in cultural practices considering: <ul style="list-style-type: none"> Changes in traditional practices specifically linked to cultural identity 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies Visual impact assessment Field studies
		<ul style="list-style-type: none"> Change in teaching/transmittal to the next generation considering: <ul style="list-style-type: none"> Removal of cultural connection required for teaching/transmittal to the next generation 	<ul style="list-style-type: none"> Avoid or minimize effects to the exercise of Métis Rights and expression of cultural practices and values Criteria and indicators may be adjusted based on ongoing engagement with communities 	<ul style="list-style-type: none"> Métis communities IK studies that are shared with Hydro One Archaeology/heritage studies Visual impact assessment Field studies

¹Valued component specific study areas will be determined during the EA

² Depending on the taxa/species, field data may be used to determine relative abundance (e.g. songbirds) or level of activity (e.g. amphibians) which will be used to predict changes to this indicator. In other instances, publicly available population data (e.g. moose) will be used.



Notes:

- This is a draft/preliminary list subject to refinement/change based on ongoing consultation and new information that may be received during the EA.
- Listed data sources may apply to more than one criteria and/or factor.
- Only those criteria/indicators for which suitable data is available will be used as part of the assessment.

Acronyms and Abbreviations

ANSI – Area of Natural and Scientific Interest

AOC – Area of Concern

CAC – Criteria Air Contaminants

DFO – Fisheries and Oceans Canada

EA – environmental assessment

ECCC – Environment and Climate Change Canada

ENDM – Ministry of Energy, Northern Development and Mines

ERIS – Environmental Risk Information Services

GHG – Greenhouse Gas

GIS – Geographic Information Systems

ha – hectare

IK – Indigenous Knowledge

LiDAR – Light Detection and Ranging

LIO – Land Information Ontario

MECP – Ministry of Environment, Conservation and Parks

MNR – Ministry of Natural Resources and Forestry

MMAH – Ministry of Municipal Affairs and Housing

n/a – Not applicable

NHIC – Natural Heritage Information Centre

OGDE – Ontario Geospatial Data Exchange

OMAFRA – Ministry of Agriculture, Food and Rural Affairs

Project Footprint - lands covered by the transmission line right-of-way, access roads and supporting infrastructure (e.g., laydown areas) to be considered in completing fieldwork and identifying direct environmental effects

ROM – Royal Ontario Museum



ROW – Right-of-Way

SWH – Significant Wildlife Habitat

