



**FINAL ENVIRONMENTAL ASSESSMENT**  
**Section 8.0 Net Effects**  
**November 2023**

## Acknowledgements

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We wish to acknowledge that the Waasigan Transmission Line Project is located within lands that represent the traditional territories and homelands of the Robinson-Superior Treaty (1850) First Nations and Treaty #3 (1873), and traverse the Red Sky Métis Independent Nation, Northwestern Ontario Métis Community and Northern Lake Superior Métis Community.

Hydro One also wishes to acknowledge Indigenous artist, Storm Angeconeb, for developing the covering page and wildlife designs throughout the Final Environmental Assessment. Storm is a highly recognized visual artist from Lac Seul First Nation in Treaty #3 and currently resides in Red Lake. Many of her works include animals and birds as representations of herself or those close to her. The artist's description of the covering page is presented below.

Hydro One Environmental Study Art:

What stands out in this art piece is the symbolic representation of solar rays as “Bringing Power”; we can see the environment represented through the wildlife and Ojibwe floral visuals. This artwork is an excellent representation of Hope, Life, and Opportunity, visually portrayed through the Black Bear and her two cubs. The colour theme of this artwork comes from the Waasigan Transmission Line Project brand identity.

Artist: Storm Angeconeb

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## 8.0 Net Effects Assessment Summary

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### *Bagidawewin Ezhi-ganawendamang*

Net effects assessments on the Project were completed for the criteria and indicators in Sections 6.0 and 7.0. This section summarizes the results of the net effects assessment, which are provided in Table 8.0-1. As noted in Table 8.0-1, there are no significant effects predicted after implementation of mitigation measures for all criteria and indicators.

Two valued components identified that no net effects were predicted after the implementation of mitigation measures including Archaeological Resources (Section 7.5) and Built Heritage Resources and Cultural Heritage Landscapes (Section 7.6). As such, these valued components are not included in Table 8.0-1.



**Table 8.0-1: Summary of Net Effects Assessment**

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
<b>Natural Environment</b>										
<b>Physiography, Geology, Surficial Geology and Soils (Section 6.1)</b>										
Geology and Soil Distribution	Change to the extent or properties of geologic features	Limited disturbance to geologic features	Direct	Negative	Negligible	Project Footprint	Permanent	Infrequent	Probable	Not significant
Geology and Soil Distribution	Change to areal extent of productive soil within the Project footprint	Project structures reduce available area of productive soils	Direct	Negative	Low	Project Footprint	Long-term	Infrequent	Probable	Not significant
<b>Surface Water (Section 6.2)</b>										
Surface Water	Surface water quantity; and Surface water quality	Net changes to surface water quantity and surface water quality from short-term water discharges	Direct	Negative	Negligible	Local	Short-term	Frequent	Probable	Not significant
Surface Water	Surface water quality	Net changes to surface water quality from the wash-off of spills and leaks to nearby waterbodies	Direct	Negative	Negligible	Local	Short-term	Infrequent	Possible	Not significant
Surface Water	Surface water quality	Net changes to surface water quality from the wash-off of explosives spills and residues from blasting activities to nearby waterbodies	Direct	Negative	Negligible	Local	Short-term	Frequent	Probable	Not significant
Surface Water	Surface water quantity	Net changes to surface water quantity from short-term water taking	Direct	Negative	Negligible	Local	Short-term	Frequent	Probable	Not significant
Surface Water	Surface water quality	Net changes to surface water quality from the wash-off of organic debris from work sites to nearby waterbodies, and/or increased rates of erosion in disturbed and exposed areas with sediment transport and delivery to adjacent waterbodies	Direct	Negative	Negligible	Local	Short-term	Frequent	Probable	Not significant
Surface Water	Surface water quantity; and Surface water quality	Net changes to surface water quantity due to changes in land cover	Direct	Negative	Negligible	Local	Long-term	Frequent	Probable	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Surface Water	Surface water quantity; and Surface water quality	Net changes to surface water quantity and surface water quality during short-term water diversions at water crossings	Direct	Negative	Negligible	Local	Short-term	Infrequent	Probable	Not significant
Surface Water	Surface water quantity; and Surface water quality	Net changes to surface water quantity and surface water quality due to changes in channel hydraulics at water crossings	Direct	Negative	Negligible	Local	Long-term	Infrequent	Possible	Not significant
<b>Groundwater (Section 6.3)</b>										
Groundwater	Groundwater levels and flow	Changes to groundwater levels and flows from excavations and dewatering activities	Direct	Negative	Low	LSA	Short-term	Infrequent	Probable	Not significant
Groundwater	Groundwater quality	Changes to groundwater quality from excavations and dewatering activities	Direct	Negative	Low	Project Footprint	Medium-term	Infrequent	Possible	Not significant
Groundwater	Groundwater levels and flow	Changes to groundwater levels and flows from altered recharge rates due to vegetation clearing, and road and structure construction	Indirect	Positive to Negative	Negligible	LSA	Long-term	Infrequent	Possible	Not significant
Groundwater	Groundwater levels, flow, and quality	Changes to groundwater quality and flow from blasting for road, quarry, and foundation construction	Direct	Negative	Moderate	Project Footprint	Medium-term to Permanent	Frequent	Probable	Not significant
Groundwater	Groundwater levels and flow	Changes to groundwater levels and flow associated with operation of construction camp water supply wells	Direct	Negative	Low	LSA	Medium-term	Continual	Probable	Not significant
Groundwater	Groundwater quality	Changes to groundwater quality due to water discharges from construction activities and camps	Direct	Negative	Low	LSA	Medium-term	Frequent	Possible	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
<b>Vegetation and Wetlands (Section 6.4)</b>										
Upland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 2,439 ha (2.3% of the LSA's baseline characterization).	Project footprint	Medium-term to Long-term/ Reversible	Infrequent (for temporary footprint disturbances and in non-treed upland ecosystems)/ Continuous (for permanent footprint disturbances and in treed upland ecosystems)	Certain	Not significant
Upland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant
Upland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction)/ Unlikely (Operations and Maintenance)	Not significant
Wetland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 294 ha (1.8% of the LSA's baseline characterization).	Project footprint	Medium-term to Long-term/ Reversible	Infrequent (for temporary footprint disturbances and in non-treed wetland ecosystems)/ Continuous (for permanent footprint disturbances and in treed wetland ecosystems)	Certain	Not significant
Wetland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Wetland ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction)/ Unlikely (Operations and Maintenance)	Not significant
Riparian ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 129 ha (0.4% of the LSA's baseline characterization).	Project footprint	Medium-term to Long-term/ Reversible	Infrequent (for temporary footprint disturbances and in non-treed riparian ecosystems)/Continuous (for permanent footprint disturbances and in treed riparian ecosystems)	Certain	Not significant
Riparian ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant
Riparian ecosystem	Ecosystem availability Ecosystem distribution Ecosystem composition	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction) / Unlikely (Operations and Maintenance)	Not significant
Species at Risk	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 10.8% of the LSA's baseline characterization.	Project footprint	Medium-term to Long-term/ Reversible	Infrequent	Certain	Not Significant
Species at Risk	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant
Species at Risk	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction)/ Unlikely (Operations and Maintenance)	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Plant Species of Conservation Concern	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 2%-3.6% of the LSA's baseline characterization of each SOCC and SWH type.	Project footprint	Medium-term to Long-term/ Reversible	Infrequent	Certain	Not Significant
Plant Species of Conservation Concern	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant
Plant Species of Conservation Concern	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction)/ Unlikely (Operations and Maintenance)	Not significant
Plants of Traditional Use	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Ecosystem Loss or Alteration	Direct	Negative	Low. Predicted loss of 2,729 ha (3.0% of the LSA's baseline characterization).	Project footprint	Medium-term to Long-term/ Reversible	Infrequent	Certain	Not Significant
Plants of Traditional Use	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Dust and Air Emissions, and Subsequent Deposition	Indirect	Negative	Negligible	Local	Medium-term/ Reversible	Frequent	Possible	Not significant
Plants of Traditional Use	Habitat Quantity Ecosystem Habitat Distribution Survival and Reproduction	Introduction and Spread of Noxious and Invasive Plant Species	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Possible (Construction)/ Unlikely (Operations and Maintenance)	Not significant
<b>Wildlife and Wildlife Habitat (Section 6.5)</b>										
Moose	Habitat Availability	Habitat loss	Direct	Negative	Direct loss of 1,794 ha of moderate to high suitability moose habitat, 39.0 ha of moose late wintering habitat, and 3.1 ha of aquatic feeding areas.	Local	Permanent/ Irreversible or Medium-term/ Reversible (for reclaimed areas)	Continuous	Certain	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Moose	Habitat Availability	Sensory disturbance	Direct	Negative	Reduced quality of habitat and possible avoidance in the LSA from sensory disturbance during construction.	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Moose	Habitat Distribution	Habitat loss	Direct	Negative	Small reduction in movements among habitat patches due to fragmentation of suitable habitat.	Local	Permanent/ Irreversible	Continuous	Possible	Not significant
Moose	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Moose	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Unlikely	Not significant
Moose	Survival and Reproduction	Collisions with project vehicles and equipment	Direct	Negative	Small increase in mortality after implementation of mitigation measures.	Local	Medium-term/ Reversible	Infrequent	Possible	Not significant
Moose	Survival and Reproduction	Increase in public access	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Infrequent	Unlikely	Not significant
Moose	Survival and Reproduction	Use of linear corridors and converted habitat	Direct	Negative	Small increase in mortality after implementation of mitigation measures.	Local	Permanent/ Irreversible	Continuous	Probable	Not significant
Gray Fox	Habitat Availability	Habitat loss	Direct	Negative	Direct loss of approximately 2,345 ha of moderate and high suitability habitat.	Local	Permanent/ Irreversible	Continuous	Certain	Not significant
Gray Fox	Habitat Availability	Sensory disturbance	Direct	Negative	Reduced quality of habitat and possible avoidance in the gray fox LSA from sensory disturbance during construction.	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Gray Fox	Habitat Distribution	Habitat loss	Direct	Negative	Small reduction in movements among habitat patches.	Local	Permanent/ Irreversible	Continuous	Certain	Not Significant
Gray Fox	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Gray Fox	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Unlikely	Not significant
Gray Fox	Survival and Reproduction	Collisions with Project Vehicles and Equipment	Direct	Negative	Negligible	Project Footprint	Medium-term/ Reversible	Infrequent	Unlikely	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Gray Fox	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Unlikely	Not significant
Furbearers (Gray wolf)	Habitat Availability	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Unlikely	Not significant
Furbearers (Gray wolf)	Habitat Availability	Sensory disturbance	Direct	Negative	Low magnitude - Reduced quality of habitat and possible avoidance.	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Furbearers (Gray wolf)	Habitat Distribution	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Unlikely	Not significant
Furbearers (Gray wolf)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Furbearers (Gray wolf)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Unlikely	Not significant
Furbearers (Gray wolf)	Survival and Reproduction	Vehicle collisions	Direct	Negative	Negligible	Project footprint	Medium-term/ Reversible	Infrequent	Unlikely	Not significant
Furbearers (Gray wolf)	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Unlikely	Not significant
Furbearers (American marten)	Habitat Availability	Habitat loss	Direct	Negative	Direct loss of approximately 858 ha of moderate and high suitability habitat (2.3% of the wildlife and wildlife habitat LSA baseline characterization; 0.7% of the marten RSA baseline characterization).	Local	Permanent/ Irreversible	Continuous	Certain	Not significant
Furbearers (American marten)	Habitat Availability	Sensory disturbance	Direct	Negative	Reduced quality of habitat and possible avoidance in the wildlife and wildlife habitat LSA from sensory disturbance during construction.	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Furbearers (American marten)	Habitat Distribution	Habitat loss	Direct	Negative	Small reduction in movements among habitat patches due to increased linear disturbance.	Local	Permanent/ Irreversible	Continuous	Possible	Not significant
Furbearers (American marten)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Project Footprint	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Furbearers (American marten)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Unlikely	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Furbearers (American marten)	Survival and Reproduction	Vehicle collisions	Direct	Negative	Negligible	Project Footprint	Medium-term/ Reversible	Infrequent	Unlikely	Not significant
Furbearers (American marten)	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Infrequent	Unlikely	Not significant
Furbearers (Beaver)	Habitat Availability	Habitat loss	Direct	Negative	Direct loss of 469 ha of moderate and high suitability habitat (3.6% of the LSA and 1.2% of the RSA Baseline Characterization).	Local	Permanent/ Irreversible	Continuous	Certain	Not significant
Furbearers (Beaver)	Habitat Availability	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Furbearers (Beaver)	Habitat Distribution	Habitat loss	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Furbearers (Beaver)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Continuous	Unlikely	Not significant
Furbearers (Beaver)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Unlikely	Not significant
Furbearers (Beaver)	Survival and Reproduction	Increase in public access	Direct	Negative	Negligible	Local	Permanent/ Irreversible	Infrequent	Possible	Not significant
Little brown myotis and northern myotis	Habitat Availability	Habitat loss	Direct	Negative	Direct loss of approximately 1,433 ha of candidate maternity roost habitat.	Local	Permanent	Continuous	Certain	Not significant
Little brown myotis and northern myotis	Habitat Availability	Sensory disturbance	Direct	Negative	Reduced quality of roosting habitat and possible avoidance in the LSA from sensory disturbance during construction.	Local	Medium-term/ Reversible	Continuous	Probable	Not significant
Little brown myotis and northern myotis	Habitat Distribution	Habitat loss	Direct	Negative	Small reduction in the spatial distribution of habitat due to loss of approximately 1,433 ha of maternity roost habitat.	Local	Permanent	Continuous	Certain	Not significant
Little brown myotis and northern myotis	Survival and Reproduction	Habitat loss	Direct	Neutral	Negligible	Local	Permanent	Continuous	Certain	Not significant
Little brown myotis and northern myotis	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term/ Reversible	Continuous	Probable	Not significant

Criteria	Indicators	Net Effect	Direct/Indirect	Direction	Magnitude	Geographic Extent	Duration/Reversibility	Frequency	Likelihood of Occurrence	Significance
Little brown myotis and northern myotis	Survival and Reproduction	Vehicle collisions	Direct	Negative	Negligible	Local	Medium-term/Reversible (Construction Stage) Long-term/Irreversible (Operation Stage)	Infrequent	Possible (Construction Stage) Unlikely (Operations Stage)	Not significant
Little brown myotis and northern myotis	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Project Footprint	Permanent/Irreversible	Infrequent	Unlikely (if all maternity roost habitat is cleared outside of the bat roosting period) Possible (if maternity roosting is cleared during the roosting period and site-specific mitigation is not effective)	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Habitat Availability	Habitat loss	Direct	Negative	Low. Direct loss of 523 ha of Amphibian Breeding Habitat , 71 ha of Turtle Nesting Area , and 367 ha of Turtle Wintering Area).	Project Footprint	Permanent, but reversible if areas regenerate with suitable habitat	Continuous	Certain	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Behavioural avoidance of habitat avoidance due to increased sensory disturbance.	Local Study Area	Short-term, and reversible	Frequent	Possible (construction phase)	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Habitat Distribution	Habitat loss	Direct	Negative	Negligible	Local Study Area	Permanent, but reversible if areas regenerate with suitable habitat	Continuous	Possible	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Habitat Distribution	Sensory disturbance	Direct	Negative	Negligible.	Local Study Area	Medium-term, and reversible	Frequent	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Herpetofauna (Snapping turtle and Spring Peeper)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local Study Area	Permanent, but reversible if areas regenerate with suitable habitat	Continuous	Probable	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Low. Reduced reproductive output due to increased sensory disturbance.	Local Study Area	Short-term, and reversible	Frequent	Possible	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Survival and Reproduction	Incidental Take	Direct	Negative	Negligible	Project Footprint	Permanent, but reduced after construction phase	Infrequent	Possible	Not significant
Herpetofauna (Snapping turtle and Spring Peeper)	Survival and Reproduction	Vehicle collisions	Direct	Negative	Low. Increased mortality of individuals over the life of the Project.	Project Footprint	Permanent, but reduced after construction phase	Frequent	Certain (construction phase) and possible (operation phase)	Not significant
Raptors (Bald Eagle)	Habitat Availability	Habitat loss	Direct	Negative	Low. Direct loss of 1,835 ha of moderate to high suitability habitat (2.7% of available habitat within the LSA).	Local	Permanent	Continuous	Certain	Not significant
Raptors (Bald Eagle)	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting and roosting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant
Raptors (Bald Eagle)	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes or locations due to loss of 1,835 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Raptors (Bald Eagle)	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Raptors (Bald Eagle)	Survival and Reproduction	Habitat loss	Direct	Negative	Low. Reduction in predicted abundance by three individuals compared to baseline characterization.	Local	Permanent	Continuous	Possible	Not significant
Raptors (Bald Eagle)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Possible	Not significant
Raptors (Bald Eagle)	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible (construction phase)	Not significant
Raptors (Bald Eagle)	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Probable	Not significant
Raptors (Bald Eagle)	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat.	Local	Permanent	Infrequent	Possible	Not significant
Raptors (Bald Eagle)	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Local	Permanent	Infrequent	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Habitat Availability	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Certain	Not significant
Marsh Birds (Trumpeter Swan)	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant
Marsh Birds (Trumpeter Swan)	Habitat Distribution	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat.	Local	Permanent	Infrequent	Possible	Not significant
Marsh Birds (Trumpeter Swan)	Survival and Reproduction	Incidental take	Direct	Negative	Low. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Infrequent	Possible	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Habitat Availability	Habitat loss	Direct	Negative	<p><b>Canada warbler</b> Low. Direct loss of 1,716 ha of moderate to high suitability habitat (2.4% of available habitat within the LSA).</p> <p><b>Eastern wood-pewee</b> Low. Direct loss of 1,385 ha of moderate to high suitability habitat (2.5% of available habitat within the LSA).</p> <p><b>Olive-sided flycatcher</b> Low. Direct loss of 2,132 ha of moderate to high suitability habitat (2.6% of available habitat within the LSA).</p>	Local	Permanent	Continuous	Certain	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes or locations due to loss of approximately 1,400 ha to 2,100 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Habitat loss	Direct	Negative	<p><b>Canada warbler</b> Low. Reduction in predicted abundance by 17 individuals compared to baseline characterization.</p> <p><b>Eastern wood-pewee</b> Low. Reduction in predicted abundance by one individual compared to baseline characterization.</p> <p><b>Olive-sided flycatcher</b> Low. Reduction in predicted abundance by three individuals compared to baseline characterization.</p>	Local	Permanent	Continuous	Probable	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Probable	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/Indirect	Direction	Magnitude	Geographic Extent	Duration/Reversibility	Frequency	Likelihood of Occurrence	Significance
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Moderate. Reduced survival and/or reproduction due to increased nest parasitism and/or predation risk associated with increased edge habitat.	Local	Permanent	Frequent	Possible	Not significant
Songbirds (Canada Warbler, Eastern Wood-Pewee, Olive-Sided Flycatcher)	Survival and Reproduction	Incidental take	Direct	Negative	Moderate. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Frequent	Probable	Not significant
Bank Swallow	Habitat Availability	Habitat loss	Direct	Negative	Low. Direct loss of 218 ha of moderate to high suitability habitat (2.8% of available habitat within the LSA). Including loss of 7 ha of protected habitat.	Local	Permanent	Continuous	Certain	Not significant
Bank Swallow	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant
Bank Swallow	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes due to loss of 218 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Bank Swallow	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Bank Swallow	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Probable	Not significant
Bank Swallow	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Probable	Not significant
Bank Swallow	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Bank Swallow	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant
Bank Swallow	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat	Local	Permanent	Infrequent	Possible	Not significant
Bank Swallow	Survival and Reproduction	Incidental take	Direct	Negative	Low. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Infrequent	Possible	Not significant
Barn Swallow and Chimney Swift	Habitat Availability	Habitat loss	Direct	Negative	<b>Barn swallow</b> Low. Direct loss of 108 ha of moderate to high suitability habitat (3.8% of available habitat within the LSA). <b>Chimney swift</b> Low. Direct loss of 50 ha of moderate to high suitability habitat (1.9% of available habitat within the LSA).	Local	Permanent	Continuous	Certain	Not significant
Barn Swallow and Chimney Swift	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Barn Swallow and Chimney Swift	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes due to loss of approximately 50 ha to 110 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Barn Swallow and Chimney Swift	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Barn Swallow and Chimney Swift	Survival and Reproduction	Habitat loss	Direct	Negative	<b>Barn swallow</b> Negligible <b>Chimney swift</b> Negligible	Local	Permanent	Continuous	Probable	Not significant
Barn Swallow and Chimney Swift	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Probable	Not significant
Barn Swallow and Chimney Swift	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant
Barn Swallow and Chimney Swift	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant
Barn Swallow and Chimney Swift	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Negligible	Local	Permanent	Infrequent	Possible	Not significant
Barn Swallow and Chimney Swift	Survival and Reproduction	Incidental take	Direct	Negative	Negligible	Local	Permanent	Infrequent	Possible	Not significant
Bobolink	Habitat Availability	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Certain	Not significant
Bobolink	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Bobolink	Habitat Distribution	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Possible	Not significant
Bobolink	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Bobolink	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Probable	Not significant
Bobolink	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Probable	Not significant
Bobolink	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant
Bobolink	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Bobolink	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat	Local	Permanent	Infrequent	Possible	Not significant
Bobolink	Survival and Reproduction	Incidental take	Direct	Negative	Low. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Infrequent	Possible	Not significant
Eastern Whip-poor-will	Habitat Availability	Habitat loss	Direct	Negative	Low. Direct loss of 2,754 ha of moderate to high suitability habitat (3% of available habitat within the LSA). Including loss of 6 ha of protected habitat.	Local	Permanent	Continuous	Certain	Not significant
Eastern Whip-poor-will	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant
Eastern Whip-poor-will	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes due to loss of 2,754 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Eastern Whip-poor-will	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Eastern Whip-poor-will	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Possible	Not significant
Eastern Whip-poor-will	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Possible	Not significant
Eastern Whip-poor-will	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant
Eastern Whip-poor-will	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/Indirect	Direction	Magnitude	Geographic Extent	Duration/Reversibility	Frequency	Likelihood of Occurrence	Significance
Eastern Whip-poor-will	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat.	Local	Permanent	Infrequent	Possible	Not significant
Eastern Whip-poor-will	Survival and Reproduction	Incidental take	Direct	Negative	Low. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Infrequent	Probable	Not significant
Landbirds (Common Nighthawk)	Habitat Availability	Habitat loss	Direct	Negative	Low. Direct loss of 127 ha of moderate to high suitability habitat (1.9% of available habitat within the LSA).	Local	Permanent	Continuous	Certain	Not significant
Landbirds (Common Nighthawk)	Habitat Availability	Sensory disturbance	Direct	Negative	Low. Reduced quality of nesting habitat and possible avoidance due to increased sensory disturbance.	Local	Medium-term	Continuous	Probable	Not significant
Landbirds (Common Nighthawk)	Habitat Distribution	Habitat loss	Direct	Negative	Low. Slight shifts in territory sizes due to loss of 127 ha of moderate and high suitability habitat.	Local	Permanent	Continuous	Possible	Not significant
Landbirds (Common Nighthawk)	Habitat Distribution	Sensory disturbance	Direct	Negative	Low. Slight shifts in territory sizes or locations due to increased human disturbance.	Local	Medium-term	Continuous	Possible	Not significant
Landbirds (Common Nighthawk)	Survival and Reproduction	Habitat loss	Direct	Negative	Negligible	Local	Permanent	Continuous	Possible	Not significant
Landbirds (Common Nighthawk)	Survival and Reproduction	Sensory disturbance	Direct	Negative	Negligible	Local	Medium-term	Continuous	Possible	Not significant
Landbirds (Common Nighthawk)	Survival and Reproduction	Vehicle collisions	Indirect	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Medium-term	Infrequent	Possible	Not significant
Landbirds (Common Nighthawk)	Survival and Reproduction	Electrocution and collisions with the transmission line	Direct	Negative	Low. Mortality of a few individuals over the life of the Project may occur.	Local	Permanent	Continuous	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/Indirect	Direction	Magnitude	Geographic Extent	Duration/Reversibility	Frequency	Likelihood of Occurrence	Significance
Landbirds (Common Nighthawk)	Survival and Reproduction	Increase in edge habitat	Direct	Negative	Low. Reduced survival and/or reproduction due to increased predation risk associated with increased edge habitat.	Local	Permanent	Infrequent	Possible	Not significant
Landbirds (Common Nighthawk)	Survival and Reproduction	Incidental take	Direct	Negative	Low. Reduced survival and/or reproduction due to destruction of nests.	Local	Permanent	Infrequent	Probable	Not significant
<b>Fish and Fish Habitat (Section 6.6)</b>										
Species at Risk (Lake Sturgeon) Species of Conservation Concern (Northern Brook Lamprey, Coaster Brook Trout, and Deepwater Sculpin) Criteria Species (Lake Trout, Brook Trout, Northern Pike, and Walleye)	Habitat quantity Habitat quality	Net changes to fish habitat quantity and quality through physical alteration of waterbodies, changes in riparian and in water vegetation, channel morphology.	Direct	Negative	Low	Project footprint	Medium-term for temporary water crossings Long-term to permanent for permanent water crossings	Infrequent	Unlikely where proposed work is above the high-water mark (e.g., installation of clear span bridge). Probable where proposed work is below the high-water mark (e.g. installation of a culvert).	Not significant
Species at Risk (Lake Sturgeon) Species of Conservation Concern (Northern Brook Lamprey, Coaster Brook Trout, and Deepwater Sculpin) Criteria Species (Lake Trout, Brook Trout, Northern Pike, and Walleye)	Abundance Distribution	Net changes in fish access to habitats, affecting fish abundance and distribution, from placement of water crossing structures.	Direct	Negative	Negligible	Local to Regional	Medium-term for temporary water crossings Permanent for permanent water crossings	Frequent where proposed work is above the high-water mark (e.g., installation of clear span bridge). Continuous where proposed work is below the high-water mark (e.g., installation of a culvert).	Unlikely where proposed work is above the high-water mark (e.g., installation of clear span bridge). Probable where proposed work is below the high-water mark (e.g., installation of a culvert).	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Species at Risk (Lake Sturgeon) Species of Conservation Concern (Northern Brook Lamprey, Coaster Brook Trout, and Deepwater Sculpin) Criteria Species (Lake Trout, Brook Trout, Northern Pike, and Walleye)	Habitat quantity Habitat quality	Net changes to water and sediment quality and quantity (e.g., may alter drainage patterns and increase or decrease drainage flows and surface water levels, which could affect fish habitat quantity and quality etc.).	Indirect	Negative	Low	Local to Regional	Short-term	Infrequent	Unlikely where herbicide application and spills occur >30 m away from the high-water mark.  Possible where proposed work is below the high- water mark (e.g., installation of a culvert) and/or where herbicide application and spills occur <30 m away from the high-water mark	Not significant
Species at Risk (Lake Sturgeon) Species of Conservation Concern (Northern Brook Lamprey, Coaster Brook Trout, and Deepwater Sculpin) Criteria Species (Lake Trout, Brook Trout, Northern Pike, and Walleye)	Abundance	Net changes to public access to recreational fishing areas could affect fish abundance.	Indirect	Negative	Low to Moderate	Local to Regional	Permanent	Frequent	Possible where proposed work is above the high-water mark.  Probable where proposed work is below the high-water mark	Not significant
Species at Risk (Lake Sturgeon) Species of Conservation Concern (Northern Brook Lamprey, Coaster Brook Trout, and Deepwater Sculpin) Criteria Species (Lake Trout, Brook Trout, Northern Pike, and Walleye)	Abundance Distribution Habitat Quantity Habitat Quality	Changes to Abundance, Distribution Habitat Quantity and Habitat Quality due to the interaction of the Project with climate change	Direct and Indirect	Negative	Low (variable and predicted to increase with time)	Local to Regional	Short-term to Permanent	Increasingly frequent	Probable	Not significant



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
<b>Air Quality (Section 6.7)</b>										
Air Quality	Change to ambient criteria air contaminants and fugitive dust in the study area, including: SPM, PM <sub>10</sub> and PM <sub>2.5</sub> , CO, NO <sub>2</sub> , and SO <sub>2</sub>	Net change in CAC and fugitive dust ambient conditions during construction activities	Direct	Negative	Moderate to High	Local - LSA	Short-term – reversible	Frequent	Possible	Not significant
<b>Greenhouse Gas (Section 6.8)</b>										
Greenhouse Gas	Predicted CO <sub>2</sub> emissions predicted CH <sub>4</sub> emissions predicted N <sub>2</sub> O emissions	GHG emissions during construction activities	Direct	Negative	Low	Beyond regional	Permanent	Continual	Certain	Not significant
<b>Acoustic Environment (Section 6.9)</b>										
Noise	Change in noise levels in the study area; and Compliance with applicable guidance documents	Net change in noise emissions during construction activities	Direct	Negative	Negligible to High	Local	Short-term	Periodic	Probable	Not significant
Vibration	Change in air and/or ground vibration levels in the study area; and Compliance with applicable guidance documents	Net change in vibration during construction activities	Direct	Negative	Negligible to High	Local	Short-term	Periodic	Probable	Not significant
Noise	Change in noise levels in the study area; and Compliance with applicable guidance documents	Net change in noise emissions during operation and maintenance – maintenance activities	Direct	Negative	Negligible to High	Local	Short-term	Periodic	Probable	Not significant
Noise	Change in noise levels in the study area; and Compliance with applicable guidance documents	Net change in noise emissions during operation and maintenance – operation of the TSs	Direct	Negative	Negligible	Local	Long-term	Continuous	Probable	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Noise	Change in noise levels in the study area; and Compliance with applicable guidance documents	Net change in noise emissions during operation and maintenance – operation of the transmission line	Direct	Negative	Negligible to High	Local	Short-term	Infrequent	Probable	Not significant
<b>Socio-economic Environment</b>										
<b>Land and Resource Use (Section 7.1)</b>										
Provincial Parks; Conservation Reserves; ANSIs; and Enhanced Management Areas.	Change to protected areas	Net changes to protected areas.	Direct and Indirect	Negative	Low to Moderate	Local	Long-term	Continual	Certain	Not significant
Provincial Parks; Conservation Reserves; ANSIs; and Enhanced Management Areas.	Changes to the management objectives of parks and protected areas	Net changes to the management objectives of parks and protected areas.	Direct	Negative	Negligible	Local	Long-term	Continual	Probable	Not significant
Land Use Planning	Change to land use policy and planning	Net changes to land use policy and planning.	Direct	Negative	Negligible	Local	Long-term	Continual	Certain	Not significant
Land Use Planning	Changes to current land use	Net changes to current land use.	Direct	Negative	Moderate	Local	Long-term	Continual	Certain	Not significant
Forestry Resource Use	Change to the area and access of forestry resources	Net changes to the area and access of forestry resources.	Direct and Indirect	Negative	Negligible	Local	Short-term and Long-term	Continual	Certain	Not Significant
Mining Resource Use	Change to the area and access of mining resources	Net changes to the area and access of mining resources.	Direct	Negative	Negligible	Local	Long-term	Continual	Certain	Not significant
Aggregate Resources	Change to area and access of aggregate resources	Net changes to the area and access of aggregate resources.	Direct	Negative	Negligible	Local	Long-term	Continual	Certain	Not significant
Hunting, Trapping, and Fishing	Changes to area and access of hunting, trapping, and fishing and associated activities	Net changes to area and access to hunting, trapping, fishing and associated activities.	Direct and Indirect	Negative and Positive	Negligible	Local	Long-term	Infrequent	Certain	Not significant
Recreation and Commercial Tourism	Change to quantity and quality of lands available for recreation and commercial tourism	Net changes to the quantity and quality of lands available for recreation and commercial tourism activities.	Direct and Indirect	Negative and Positive	Negligible	Local	Short-term to Long-Term	Frequent	Certain	Not significant





Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Navigation	Change to area and access of navigable watercourses, watercourse crossings and navigation	Net changes to the area and access of navigable watercourses, watercourse crossings, and navigation.	Direct	Negative	Negligible	Local	Short-term to Long-Term	Infrequent	Probable	Not significant
<b>Community Well Being (Section 7.2)</b>										
Quality of Life – Noise	Nuisance: Noise	Net change in nuisance effects due to changes in noise emissions during construction activities.	Direct	Negative	Negligible to High	Local	Short-term/ Reversible	Periodic/One-time event	Probable	Not significant
Quality of Life – Noise	Nuisance: Noise	Net change in nuisance effects due to changes in noise emissions during operation and maintenance – maintenance activities	Direct	Negative	Negligible to High	Local	Short-term	Periodic	Probable	Not significant
Quality of Life – Noise	Nuisance: Noise	Net change in nuisance effects due to changes in noise emissions during operation and maintenance – operation of the Transformer Stations	Direct	Negative	Negligible	Local	Long-term	Continuous	Probable	Not significant
Quality of Life – Noise	Nuisance: Noise	Net change in nuisance effects due to changes in noise emissions during operation and maintenance – operation of the transmission line	Direct	Negative	Negligible to High	Local	Short-term	Infrequent	Probable	Not significant
Quality of Life – Vibration	Nuisance: Vibration	Net change in nuisance effects due to changes in vibration during construction activities.	Direct	Negative	Negligible to High	Local	Short-term	Periodic	Probable	Not significant
Quality of Life – Air Quality	Nuisance: Air Quality	Net change in nuisance effects due to changes in air quality during construction activities.	Direct	Negative	Moderate to High	Local	Short-term/ Reversible	Frequent	Possible	Not significant
Quality of Life – Public Safety	Public Safety	Net changes in public safety.	Direct	Negative	Negligible	Local	Short-term/ Reversible	Infrequent	Unlikely	Not significant
Quality of Life – Community-Worker Interactions	Interactions between site staff and communities	Potential increase in social issues due to worker-community interactions.	Direct	Negative	Negligible to Moderate	Local	Short-term	Infrequent	Possible	Not significant
Transportation and energy infrastructure – utilities	Demand for Services and Infrastructure	Net change in demand for energy infrastructure and capacity.	Direct	Negative	Negligible	Local	Short-term/ Reversible	Continuous	Possible	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Transportation and energy infrastructure – transportation routes	Demand for Services and Infrastructure	Net change in demand for transportation infrastructure and capacity.	Direct	Negative	Negligible	Local	Short-term/ Reversible	Continuous	Probable	Not significant
Community Services and Facilities – municipal services	Demand for Services and Infrastructure	Net change in demand for community services and facilities – municipal services.	Direct	Negative	Negligible	Local	Short-term/ Reversible	Infrequent	Unlikely	Not significant
<b>Economy (Section 7.3)</b>										
Labour Force and Local Economy	Local and regional employment opportunities	Increase in employment opportunities and income associated with the Project.	Direct/ Indirect	Positive	Low	Local to regional	Short-term	Continual	Probable	Not significant
Labour Force and Local Economy	Local and regional employment opportunities	Increase in employment opportunities and income associated with the Project.	Indirect	Positive	Low	Local to regional	Short-term	Continual	Probable	Not significant
Labour Force and Local Economy	Local and regional employment opportunities	Increase in employment opportunities and income associated with the Project.	Induced	Positive	Low	Local to regional	Short-term	Continual	Probable	Not significant
Labour Force and Local Economy	Procurement of Project materials and services from local businesses and contractors	Increases in business opportunities and revenues due to contracting, Project spending.	Direct/ Indirect	Positive	Low	Local to Regional	Short-term	Continual	Probable	Not significant
Local Government Finance	Government Taxation Revenues	Project associated payments in connection with income and other taxes during construction; property taxes to municipalities, and payments to government bodies during operation would positively affect local regional government revenues.	Direct/ Indirect	Positive	Low	Local and Regional	Long-term	Continual	Probable	Not significant
<b>Visual Aesthetics (Section 7.4)</b>										
Visual Aesthetics	Change to the visual landscape during construction	Net change to the visual landscape during construction	Direct	Negative	Low/Moderate	Local to Regional	Short-term	Continual	Certain	Not significant
Visual Aesthetics	Change to the visual landscape during operations and maintenance	Net change to the visual landscape during operations and maintenance	Direct	Negative	Low/Moderate	Local to Regional	Long-term	Continual	Certain	Not significant

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
<b>First Nations Rights, Interests and Use of Lands and Resources (Section 7.7)</b>										
Use of land and resources for the current and traditional exercise of Indigenous rights	Area (ha) of unoccupied Crown land being converted to occupied Crown land.	Net change in area of unoccupied Crown land converted to occupied Crown land.	Direct	Negative	Low	Project footprint	Short-term and long-term	Continual to Infrequent	Certain	See below <sup>(a)</sup>
Use of land and resources for the current and traditional exercise of Indigenous rights	Availability of harvested resources (considering outcomes of assessments for wildlife, vegetation, fish).	Net change in availability of harvested resources.	Direct and Indirect	Negative	Negligible to Low	Local	Short-term	Continual to Infrequent	Probable	
Use of land and resources for the current and traditional exercise of Indigenous rights	Access (increased or decreased) to preferred harvesting areas (hunting, trapping, fishing, and plant harvest).	Net change in access to preferred harvesting areas.	Direct	Negative and Positive	Negligible to Low	Local	Short-term	Infrequent	Probable	
Cultural Landscapes and Intangible Cultural Heritage	Access to culturally sensitive, sacred or spiritual landscapes and sites.	Net change in access to culturally sensitive, sacred or spiritual landscapes and sites.	Direct	Negative	Negligible to Moderate	Project footprint	Long-term	Infrequent	Possible to Probable	
Cultural Landscapes and Intangible Cultural Heritage	Quality of experience/sense of place in areas of use for traditional purposes, including sensory disturbance through Project-related changes to air quality, acoustics and visual landscape (aesthetics).	Net change in quality of experience/sense of place in areas of use for traditional purposes, including sensory disturbance.	Direct and Indirect	Negative	Low to Moderate	Local	Short-term and Long-term	Periodic and Continual	Probable	
<b>Métis Rights, Interests and Use of Lands and Resources (Section 7.8)</b>										
<b>NWOMC and Region 2</b>										
Loss of Land/Change in Priority Rights	Changes in Land Available for Métis Use	Net change in land available for Métis use	Direct	Negative	Low to Moderate	Project footprint	Short-term and long-term	Continual to Infrequent	Certain	
Harvesting/Sites	Changes to harvesting of culturally critical species	Net change to harvesting of culturally critical species	Indirect	Negative and Positive	Negligible	Local	Short-term	Continual to Infrequent	Probable	
Harvesting/Sites	Changes in physical attributes (avoidance behaviours)	Net change in physical attributes	Indirect	Negative and Positive	Moderate	Local	Short-term and long-term	Continual	Probable	



Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Harvesting/Sites	Changes to harvesting practices (harvest timing windows)	Net change to harvesting practices (timing windows)	Direct	Negative	Negligible to Low	Local	Short-term	Infrequent	Possible	*See below <sup>(a)</sup>
Harvesting/Sites	Changes to access to harvesting areas	Net change to access to harvesting areas	Direct	Negative and Positive	Negligible	Local	Short-term and long-term	Infrequent to Continual	Probable	
Harvesting/Sites Cultural Identity	Change in teaching/transmittal of knowledge to the next generation	Net change in teaching/transmittal of knowledge	Indirect	Negative	Moderate	Local	Long-term	Continual	Certain	
Harvesting Sites	Changes in perception of 'place'	Net change in perception of "place" – harvesting sites	Indirect	Negative	Moderate	Local	Long-term	Continual	Probable	
Cultural Identity	Disruption of "sense of place" Reduction in cultural practices	Net disruption of "sense of place" Net reduction in cultural practices	Direct/ Indirect	Negative	Low to Moderate	Local	Long-term	Continual	Certain	
<b>Red Sky Métis Independent Nation</b>										
Loss of Land/Change in Priority Rights	Changes in Land Available for Métis Use	Net change in land available for Métis use	Direct	Negative	Negligible	Project footprint	Short-term and long-term	Continual to Infrequent	Certain	*See below <sup>(a)</sup>
Harvesting/Sites	Changes to harvesting of culturally critical species	Net change to harvesting of culturally critical species	Indirect	Negative and Positive	Negligible	Local	Short-term	Continual to Infrequent	Probable	
Harvesting/Sites	Changes in physical attributes (avoidance behaviours)	Net change in physical attributes	Indirect	Negative and Positive	Negligible	Local	Short-term and long-term	Continual	Probable	
Harvesting/Sites	Changes to harvesting practices (harvest timing windows)	Net change to harvesting practices (timing windows)	Direct	Negative	Negligible	Local	Short-term	Infrequent	Possible	
Harvesting/Sites	Changes to access to harvesting areas	Net change to access to harvesting areas	Direct	Negative and Positive	Negligible	Local	Short-term and long-term	Infrequent to Continual	Probable	
Harvesting/Sites Cultural Identity	Change in teaching/transmittal of knowledge to the next generation	Net change in teaching/transmittal of knowledge	Indirect	Negative	Negligible	Local	Long-term	Continual	Possible	
Harvesting Sites	Changes in perception of 'place'	Net change in perception of "place" – harvesting sites	Indirect	Negative	Negligible	Local	Long-term	Continual	Possible	

Criteria	Indicators	Net Effect	Direct/ Indirect	Direction	Magnitude	Geographic Extent	Duration/ Reversibility	Frequency	Likelihood of Occurrence	Significance
Cultural Identity	Disruption of “sense of place” Reduction in cultural practices	Net disruption of “sense of place” Net reduction in cultural practices	Direct/ Indirect	Negative	Negligible	Local	Long-term	Continual	Possible	

%= percent; < = less than; EA = environmental assessment; ha = hectare; LSA = local study area; n/a = not applicable; RFD = reasonable foreseeable development; RSA = regional study area; SOCC = species of conservation concern; SWH = significant wildlife habitat.

a) For the assessment of First Nations Rights, Interests and Use of Lands and Resources and Métis Rights, Interests and Use of Lands and Resources with the implementation of mitigation measures, the net effects are not predicted to represent a substantial interference in the continued opportunity for Indigenous communities to be able to undertake use of land and resources for the current and traditional exercise of Indigenous rights. Hydro One notes that the characterization of net effects is an interpretation by Hydro One and their consultants, which has been informed by the input of communities shared through comments on the Draft EA. Hydro One recognizes that each Indigenous community is best positioned to provide context on how opportunities to undertake use of land and resources for the current and traditional exercise of Indigenous rights are taken. Hydro One is committed to engaging with Indigenous communities on potential refinements to the Project footprint and incorporation of site-specific mitigation in order to avoid or minimize impacts to the use of land and resources for the current and traditional exercise of Indigenous rights.



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