WATAYNIKANEYAP POWER L.P.

Final Environmental Study Report for the Phase 2 Connecting 17 Remote First Nation Communities Project

Comparative Analysis of Revised 115 kV Transmission Line Corridors approaching Muskrat Dam First Nation and Bearskin Lake First Nation and Temporary Camp and Laydown Areas in the vicinity of Kasabonika Lake First Nation

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Table of Contents

TABLES

APPENDICES

APPENDIX F

Kasabonika Temporary Camp – Valard June 2021 Memo

LIST OF ACRONYMS AND TERMS

Acronym/Term	Definition
AC	Alternating Current
ANSI	Area of Natural and Scientific Interest
CCEG	Central Corridor Energy Group
EA	Environmental Assessment
EAA	*Ontario Environmental Assessment Act*
END	Endangered
ESA	*Endangered Species Act*
ESR	Environmental Study Report
FNLP	First Nation Limited Partnership
Hydro One Class EA	Hydro One Class Environmental Assessment for Minor Transmission Facilities
MECP	Ministry of the Environment, Conservation and Parks
MNDMNRF	Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry
MNRF	Ontario Ministry of Natural Resources and Forestry
MOECC	Ontario Ministry of the Environment and Climate Change
the Project	Connecting 17 Remote First Nation Communities Project
PPCR	Provincial Parks and Conservation Reserves
RFD	Reasonably foreseeable development
ROW	Right-of-Way
RSFD	Resource Stewardship and Facility Development
SS	Switching Station

LIST OF UNITS

Unit	Definition
ha	Hectare
km	Kilometre
kV	Kilovolt
m	Metre

1.0 INTRODUCTION

A partnership that has grown to 24 First Nation communities was formed (First Nation Limited Partnership [FNLP], formerly known as the Central Corridor Energy Group [CCEG]) to address the need for sufficient electricity supply for 17 remote First Nation communities. FNLP partnered with Fortis Inc. (Fortis), to establish a licenced transmission company, the Wataynikaneyap Power Limited Partnership (Wataynikaneyap) with a mandate to develop, construct, operate, and own the Wataynikaneyap Transmission Project. The Wataynikaneyap Transmission Project is being developed in two phases. Phase 1, the New Transmission Line to Pickle Lake Project, is an approximately 300-kilometre (km) long, 230-kilovolt (kV) transmission line from the Dinorwic (east of Dryden) / Ignace area to Pickle Lake in northwestern Ontario. Phase 2 Connecting 17 Remote First Nation Communities (the Project) includes approximately 1,630 km of 115-kV, 44-kV, and 25-kV alternating current (AC) transmission lines, and associated infrastructure for subsystems north of Pickle Lake and Red Lake that will connect 17 remote First Nation communities currently powered by diesel generation, to the provincial electrical grid.

A Final Environmental Study Report (ESR) was submitted for the Project, which was subject to the *Ontario Environmental Assessment Act* (EAA) under the following Class Environment Assessment (EA) processes:

- the Ministry of Natural Resources and Forestry (MNRF) Class Environmental Assessment for Resource Stewardship and Facility Developments (MNRF RSFD Class EA; MNR[1] 2003);
- the MNRF Provincial Parks and Conservation Reserves Class EA (MNRF PPCR Class EA; MNR 2005); and
- the Hydro One Class Environmental Assessment for Minor Transmission Facilities (Hydro One Class EA; Ontario Hydro[2] 1992).

The Final ESR was released for public review on November 16, 2018, and underwent a 30-day public review period, ending December 17, 2018. Various ministries and Indigenous communities provided comments on the Final ESR. Wataynikaneyap worked with commenters to respond to and resolve comments following the completion of the review period. Wataynikaneyap posted responses to these comments, along with an updated version of the Final ESR reflecting required edits to their website on July 5, 2019 to mark the completion of this EA process.

[1] The Ministry of Natural Resources and Forestry (MNRF) was formerly known as the Ministry of Natural Resources (MNR) prior to 2014; now part of the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF).

[2] At the time of publication of the Class EA for Minor Transmission Facilities, Hydro One was known as Ontario Hydro prior to its reorganization into five companies in 1999. The company responsible for hydroelectricity became Hydro One.

In Section 13.0 of the Final ESR, the following commitment was made regarding changes to the Project footprint design:

Should final Project design results in changes that are outside of the limits of work[3] or changes that are inconsistent with the results of the EA; Wataynikaneyap will engage with the MNRF and the MOECC[4] to discuss potential required procedures. These are discussed in Section 5.8 of the MNRF RSFD Class EA, Section 6.8 of the MNRF PPCR Class EA and Section 3.9 of the Hydro One Class EA.

On July 10, 2019, Wataynikaneyap filed a Final ESR addendum under the Hydro One Class EA for Minor Transmission. That addendum, herein referred to as the "2019 Addendum" provided a comparative analysis of three changes to the Phase 2 transmission line right-of-way (ROW) alignment that were outside the limits of work of the alignment assessed in the Final ESR. The 2019 Addendum concluded that the changes proposed did not change the results or mitigation presented in the Final ESR. The addendum was released with a 15-day comment period ending July 25, 2019, for targeted review by the First Nations directly affected by the proposed changes as well as agencies and other stakeholder groups who commented on the Final ESR. No comments were received during the review period on the 2019 Addendum, the document was approved on August 2, 2019, and Wataynikaneyap was able to proceed with implementing the proposed changes.

This document, herein referred to as the "2021 Comparative Analysis – Muskrat Dam Bearskin Lake, and Kasabonika Lake", will adhere to the commitments made in Section 13.0 of the Final ESR, following the comparative analysis methodology established in the 2019 Addendum and additional comparative analyses undertaken since the completion of the Final ESR. As outlined in Section 3.9 of the Class EA for Minor Transmission (Ontario Hydro 1992), the purpose of an addendum is to "document the circumstances necessitating the change, the environmental effects caused by the change and what can be done to mitigate any negative impacts". This 2021 Comparative Analysis achieves these requirements by presenting an overview of the proposed design changes and providing an analysis of the Project footprint changes compared with the Project footprint assessed in the Final ESR and 2019 Addendum, including consideration of relevant mitigation measures, where applicable.

[3] In the Environmental Study Report (ESR) Wataynikaneyap proposes a limits of work of 200 m on either side of the 40-m-wide transmission line alignment ROW for the environmental assessment (EA) approval and subsequent permitting purposes.

[4] At the time of publication of the Final ESR, the current Ministry of the Environment, Conservation and Parks (MECP) was known as the Ministry of the Environment and Climate Change (MOECC).

1.1 Description of Project Design Refinements

Since the release of the Final ESR and completion of the 2019 Addendum and based on input from First Nations, Wataynikaneyap has recently identified two additional areas to improve the alignment of the 115-kV transmission line as well as related access roads, and temporary camps and laydown areas specifically:

- On the Pickle Lake Subsystem ROW alignment at two locations along the connection approaching Muskrat Dam First Nation and at Bearskin Lake First Nation (115 kV),
- Camp and laydown area in proximity to the alignment approaching Bearskin Lake First Nation, and
- Access road, camp and laydown areas in the vicinity of Kasabonika Lake First Nation.

Figures 1 and 2 in Appendix B show the changes in each of the two areas of proposed revisions compared to the current approved alignments, along with a corresponding limits of work defined around the 40-m-wide alignment right-of-way. The limits of work are defined such that if potential further location revisions to the ROW alignment are required to reflect field conditions, these would be limited to the area within the limits of work. Figure 3 in Appendix B shows the proposed additional road, camp and laydown areas in the vicinity of Kasabonika Lake First Nation.

2.0 METHOD FOR THE ANALYSIS OF PROJECT REFINEMENTS

The method used for the comparative analysis is consistent with the assessment of corridor alternatives presented in Section 3.10 and Appendix 3.11A of the Final ESR, as well as the 2019 Addendum. The following five key factors were considered in the analysis of the corridors:

- natural environment;
- land use and resource management;
- socio-economic and cultural;
- current traditional land and resource use by Indigenous communities; and
- technical, including constructability and relative cost which is derived primarily from technical constraints. Cost was not considered as the sole or overriding justification.

The complete list of calculated metrics used to support the corridor refinement analysis are presented in Appendix A (including zero values). These represent publicly available datasets and datasets collected for the Project relevant to the study areas for the analysis of these corridors. The Project footprints were evaluated by comparing the presence of features within or where applicable, adjacent to the ROW, and by highlighting discernable differences between them. The summary of metrics in Section 3.0 does not include rows for metrics not affected by the route revision (e.g., areas of natural and scientific interest (ANSI) is not included as a table row as there were no areas overlapped). As any changes to the substations proposed for the Project are not proposed in areas outside of the limits of work and are no closer to receptors than was considered within the EA, no additional assessment of potential noise effects from the Project on points of reception during the operation stage was undertaken as part of this comparative analysis. Where reference to traditional land and resource use is made, general context on the locations being compared is provided by indicating the relative number of broad types of

land uses, respecting the sensitivity of the information. Traditional land and resource use types consider values related to harvesting (e.g., hunting, trapping, fishing, harvest of plants, gardening), travel (e.g., trails, snowmobile routes), habitation (e.g., camping areas), sensitive sites (e.g., cultural, spiritual, archaeological, burial sites), natural features (e.g., rapids, specific wildlife habitat), or any other types of values shared under consent to support the environmental assessment.

Mitigation measures summarized for the Project in Section 9.0 Environmental and Social Management Plan of the Final ESR are applicable in all work areas for the Project and Wataynikaneyap with their contractor(s) will adhere to all permits and approvals required for the Project.

3.0 PROJECT REFINEMENT COMPARATIVE ANALYSIS RESULTS

The objectives of this section are to discuss the rationale for the refinement of the 115 kV, 40-m-wide transmission line alignment outside of the limits of work defined in the Final ESR and related access roads, laydown areas and camps, provide an analysis of environmental metrics for the areas of the Project footprint refinement compared with an equivalent section of the Project footprint within the Final ESR; and characterize any differences in the potential environmental effects of the change compared with the assessment provided in the Final ESR and 2019 Addendum.

This section presents the comparative analysis for the following areas:

Pickle Lake subsystem:

- ROW alignment (115 kV and 25 kV), related access roads and laydown areas along the connection to Muskrat Dam First Nation
- ROW alignment (115 kV), related access roads, camp and laydown areas along the connection to Bearskin Lake First Nation and
- Road, camp and laydown areas in the vicinity of Kasabonika Lake First Nation.

The amended Project footprint may be further refined during detailed design within the limits of work presented in the Final ESR, the 2019 Addendum and in this comparative analysis (Figures 1-3; Appendix B) in an effort to avoid sensitive features, to the extent practical, and use previously disturbed areas. Efforts will be made to reduce environmental effects associated with the preferred corridor, and Wataynikaneyap with their contractor(s) will commit to implementing mitigation measures identified in Section 9.0 Environmental and Social Management Plan of the Final ESR and adhere to all permits and approvals required for the Project.

3.1 Pickle Lake Subsystem

3.1.1 Alignment along the connection to Muskrat Dam First Nation

The route for the Project segment that crosses the Severn River (Appendix B - Figure 1) was refined based on input Wataynikaneyap has received through engagement with Muskrat Dam First Nation. A meeting was held on November 11, 2020 during which a request was made to overturn previous direction to utilize the esker that extends into the river near the community and seek an alternate crossing location.

Routing solution discussions and a helicopter flyover including Muskrat Dam First Nation Chief, Councillor and Project Lead, and Valard ROW manager, were subsequently conducted and resulted in a formal letter of acceptance for the line route that is proposed in this document on March 29, 2021. The letter confirmed that the critical land-users had been engaged as part of the community's decision-making process.

The routing change was deemed necessary due to the sensitivity of the narrow esker and ongoing land use conflicts. Wataynikaneyap was instructed to proceed with the change as presented in this document through the letter included in Appendix C.

The alignment is presented in Appendix B, Figure 1. It is noted that the 25 kV connection between the Muskrat Dam Substation and the community of Muskrat Dam will continue to be required. In the Project footprint included in the Final ESR, this 25 kV connection was aligned with the 115 kV line. The 6.96 km length of th2 25 kV line between the Muskrat Dam Substation and Structure E89 has been adjusted to align with the existing community operated road aligned with the revised 115 kV route, as shown on Figure 1.

A summary of key records of engagement with Muskrat Dam First Nation related to this revision are presented in Table 1.

Table 1: Key Communication Summary - Alignment Along the Connection to Muskrat Dam First Nation

Date	Method of Communication	Summary
November 11, 2020	Meeting with Community Leadership	Muskrat Dam First Nation leadership indicated that a change in the route away from the esker that was previously utilized in the Project design was necessary and non-negotiable.
March 17, 2021	Email	Wataynikaneyap provided a proposed routing solution and draft sign-off letter.
March 23, 2021	Letter	Muskrat Dam First Nation Chief and Council confirmed acceptance of the proposed route adjustment, indicating the appropriate land users have been involved in the decision, and directed Wataynikaneyap to proceed with the necessary approvals (see Appendix C).

A high-level baseline characterization for the amended Project footprint for the Muskrat Dam First Nation with comparison to the Project footprint assessed in the Final ESR for this segment of the Project is presented in Table 2. The full set of metrics considered is presented in Appendix A.

Table 2: Corridor Refinement Analysis - Alignment along the Connection to Muskrat Dam First Nation

Key Factors	Corridor Refinements Alignment along the Connection to Muskrat Dam First Nation MD1 (Amended Project Footprint)	Corridor Refinements Alignment along the Connection to Muskrat Dam First Nation MD2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	Corridor Refinement Analysis
Technical	**Size** ■ The 115 kV ROW is approximately 29.4 km in length, with a 25 kV ROW connection to Muskrat Dam First Nation of 6.96 km maintained within the area of change. ■ The Project footprint has an area of approximately 148.1 ha.	**Size** ■ The 115 kV and 25 kV combined ROW length within the area of change is approximately 20.6 km in length. ■ The Project footprint has an area of 92.6 ha.	■ MD1 has a moderately larger Project footprint than MD2.
	Existing Infrastructure ■ The Project footprint crosses three existing roads. The Project does not cross any existing linear corridors.	**Existing Infrastructure** ■ The Project footprint crosses one existing road. The road is crossed once. ■ The Project does not cross any existing linear corridors.	■ Three existing roads are crossed by the Project footprint defined by MD1, compared to the one existing road crossed by MD2.
Natural Environment	**Wetlands**[a] ■ The Project footprint crosses 45.5 ha of mapped wetlands.	**Wetlands**[a] ■ The Project footprint crosses 11.4 ha of mapped wetlands.	■ MD1 crosses a larger area of mapped, unevaluated wetlands than MD2.
	Waterbodies and Watercourses[b] ■ The Project footprint crosses eight watercourses. ■ The Project footprint crosses five mapped waterbodies over an area of 2.3 ha.	**Waterbodies and Watercourses**[b] ■ The Project footprint crosses three watercourses. ■ The Project footprint crosses three mapped waterbodies for an area of 0.8 ha.	■ MD1 crosses more waterbodies and watercourses than MD2. MD1 crosses a larger area of mapped waterbodies than MD2 also. The MD1 amended footprint includes winter use ice road locations mapped over waterbodies.
	Vegetation[d] ■ The Project footprint crosses: ▪ 139.1 ha of natural landcover (terrestrial); and ▪ 20.2 ha of natural disturbance.	**Vegetation**[d] ■ The Project footprint crosses: ▪ 89.4 ha of natural landcover (terrestrial); and ▪ 0 ha of natural disturbance.	■ The longer MD1 crosses a larger area of natural landcover and natural disturbance than MD2.

Key Factors	Corridor Refinements		Corridor Refinement Analysis
	Alignment along the Connection to Muskrat Dam First Nation		
	MD1 (Amended Project Footprint)	MD2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	
Natural Environment (cont'd)	**Wildlife Habitat** ■ The Project footprint crosses 70.7 ha of potential suitable moose habitat. ■ The Project footprint crosses 2.9 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 71.5 ha of potential suitable bald eagle habitat. 1.5 ha of the ROW is within 400 m of a mapped bald nest. ■ The Project footprint crosses 75.7 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 61.7 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 75 ha of potential suitable olive-sided flycatcher habitat. ■ 143.8 ha of mapped provincially tracked rare wildlife species.	**Wildlife Habitat** ■ The Project footprint crosses 72.2 ha of potential suitable moose habitat. ■ The Project footprint crosses 0.9 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 74.9 ha of potential suitable bald eagle habitat. ■ The Project footprint crosses 50.2 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 8.5 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 76.5 ha of potential suitable olive-sided flycatcher habitat. ■ 84.6 ha of mapped provincially tracked rare wildlife species.	■ MD1 crosses a smaller area of potential moose, bald eagle and olive-sided flycatcher habitat and a larger area of potential horned grebe, Canada warbler and common nighthawk habitat compared to MD2. The increase in potential common nighthawk habitat area crossed is linked to the larger area of natural disturbance land cover (areas of burns and sparse forest) crossed. MD1 crosses a larger area of mapped provincially tracked rare wildlife species than MD2.
	Threatened and endangered species or their habitat (Caribou (Boreal population)) ■ The Project footprint crosses 104.7 ha of mapped Category 2 habitat. ■ The Project footprint crosses 43.4 ha of mapped Category 3 habitat. ■ The Project ROW of the 115 kV line is 29.4 km in length. ■ The cumulative disturbance of the Project (footprint plus 500 m buffer) is 3,988.8 ha.	**Threatened and endangered species or their habitat (Caribou (Boreal population))** ■ The Project footprint crosses 35.9 ha of mapped Category 2 habitat. ■ The Project footprint crosses 56.5 ha of mapped Category 3 habitat. ■ The Project ROW of the 115 kV line is 20.6 km in length. ■ The cumulative disturbance of the Project (Footprint plus 500 m buffer) is 2,237.00 ha.	■ MD1 crosses a larger area of Category 2 woodland caribou habitat than MD2. MD1 crosses a smaller area of Category 3 woodland caribou habitat than MD2. Neither Project footprint cross Category 1 woodland caribou habitat nor spring or fall travel corridors. ■ MD1 increases the total length of the ROW. ■ MD1 increases the amount of cumulative disturbance in the Spirit Range.

Key Factors	Corridor Refinements		Corridor Refinement Analysis
	Alignment along the Connection to Muskrat Dam First Nation		
	MD1 (Amended Project Footprint)	MD2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	
Natural Environment (cont'd)	**Threatened and endangered species or their habitat (Wolverine)** ■ The Project footprint crosses 142.5 ha of potential wolverine habitat.	**Threatened and endangered species or their habitat (Wolverine)** ■ The Project footprint crosses 84.6 ha of potential wolverine habitat.	■ MD1 crosses a larger area of potential wolverine habitat than MD2.
	Threatened and endangered species or their habitat (Little brown myotis) ■ The Project footprint crosses 31.4 ha of potentially suitable little brown myotis maternity roost habitat.[5]	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 40.1 ha of potentially suitable little brown myotis maternity roost habitat.	■ MD1 crosses a smaller area of potentially suitable little brown myotis maternity roost habitat than MD2.
Socio-economic	**Archaeology and Cultural Heritage** ■ The Project footprint crosses 7.4 ha of land that has archaeological potential.	**Archaeology and Cultural Heritage** ■ The Project footprint crosses 18.7 ha of land that has archaeological potential.	■ MD1 crosses a smaller area defined to have archaeological potential than MD2.
Traditional Land and Resource Use by Indigenous Communities	**Muskrat Dam First Nation, Sachigo Lake First Nation, Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Three types of identified TLRU values, not classified as 'avoid'.	**Muskrat Dam First Nation, Sachigo Lake First Nation, Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Four types of identified TLRU values, not classified as 'avoid'.	■ MD1 option aligns with the current community preference to avoid crossing the esker approaching the community.

a) All wetlands are understood to be unevaluated.

b) In employing a conservative approach, this assessment assumes that all waterbodies and watercourses have the potential to support fish and fish habitat.

c) Waterbodies not including watercourses.

d) Natural landcover (terrestrial) includes the following landcover classes: bog – open, bog – treed, fen – open, fen – treed, forest – dense coniferous, forest – dense deciduous, forest – dense mixed, forest – regenerating depletion and forest – sparse. Anthropogenic disturbance includes the following land cover classes: forest depletion – cuts and settlement/infrastructure. Natural disturbance includes the forest depletion – burns land cover class.

The proposed realignment (MD1) was identified by community leadership through engagement following approval of the EA as the preferred route avoiding the esker that was previously utilized in the Project design. The esker width is limited, and current discussion of competing land uses in this area made it less desirable to the community

[5] The reported area estimates of potential little brown myotis maternity roost habitat crossed are based on evaluation by Wataynikaneyap and Valard of fine scale land cover classification using eFRI data acquired for this area after completion of the EA. Estimates of potential habitat areas using the broad scale LandCover 2000 dataset considered in the EA are reported in Appendix A also for context.

to locate the transmission line at this location. The proposed realignment further to the east crosses the Severn River at the closest narrow section to the planned route, resulting in a moderate increase in the length of the 115 kV ROW (increase of 9.8 km) and increase in the Project footprint area (55.5 ha). The Project footprint for MD1 intersects a larger area of mapped unevaluated wetland, more watercourses and crosses a slightly larger area of mapped waterbodies. The MD1 amended footprint includes winter use ice road locations mapped over waterbodies.

This MD1 option does not cross any anthropogenically disturbed area and crosses a larger area of natural disturbance, as the 115 kV section is no longer closely aligned with this section of the existing road. In designing this revised route where alignment with existing linear disturbance was not possible, Wataynikaneyap and their partners, in collaboration with Muskrat Dam First Nation identified options seeking to minimize the length of this revision and to avoid areas of protected species habitat to the degree possible.

The slightly longer MD1 option crosses a smaller area of potentially suitable habitat for moose, bald eagle, and olive-sided flycatcher, but a larger area of potential habitat for horned grebe, Canada warbler and common nighthawk. A bald eagle's nest location is mapped in proximity of MD1 with approximately 1.5 ha of the ROW within 400 m. Where buffer widths are not able to be maintained as identified, local MNDMNRF offices/applicable agencies will be contacted for further discussion and appropriate First Nation communities notified, where requested. For areas where the revised Project footprint will interact with areas of Species at Risk habitat not identified in current permitting, discussion with agencies will be undertaken to confirm requirements for amendments where required.

The Project footprint crosses a larger area of potential suitable wolverine habitat. Section 6.3.7 of the Final ESR characterizes potential effects of the Project to wolverine consider the effects of development of new linear features through change in habitat availability, habitat distribution and survival and reproduction. For example, loss or alternation of vegetation and topography may change habitat availability, use and connectivity, which may influence abundance and distribution; sensory disturbance during construction and reclamation can change habitat availability, affecting abundance and distribution; and site preparation, construction or maintenance activities may result in the potential loss of wolverine dens and may result in incidental take (mortality of adults of kits). In Section 6.3.7.3.1.2 of the Final ESR, it is noted that in the Red Lake area, 95% minimum convex polygon winter home ranges for wolverine average 340 km^2 for females and 1,371 km^2 for males (Dawson et al. 2010). This translates to home range diameters of approximately 20.8 km and 41.8 km for females and males, respectively. Based on these reported home range sizes and calculated diameters of wolverine home ranges, the final length of the 40-m-wide transmission line alignment ROW was determined through the Final ESR, 2019 Addendum and subsequent permitting processes to intersect approximately 65 female or 33 male wolverine home ranges. The 115 kV section of the MD1 option increases the area of wolverine habitat intersected by 8.7 km compared with the 115 kV section of the MD2 option, remaining within the approximately number of home ranges predicted to be affected by the Project. As noted above, in addition to the 115 kV line, as part of MD1 a 6.96 km segment of 25 kV transmission connection between the Muskrat Dam Substation and Structure E89 will continue to be required as part of the connection to Muskrat Dam First Nation. An equivalent section of 25 kV line had been designed to parallel the 115 kV line, in proximity to an existing road, as part of option MD2. The design of this 25 kV segment as part of the MD1 option has been adjusted to fully follow the existing linear disturbance (community road) within this segment and is therefore not considered to represent a new area of linear disturbance within potential wolverine habitat.

The MD1 option crosses a smaller area of potential maternity roosting habitat for little brown myotis. Potential habitat for bat hibernacula was not identified on the Pickle Lake subsystem during surveys along the approved alignment supporting the Final ESR. In consideration of MD1 option, a desktop assessment using eFRI data was undertaken by a third party for Wataynikaneyap (see Appendix A for additional notes on method). Low potential for bat hibernacula was identified within the assessment. Potential habitat for bat hibernacula was not identified on the Pickle Lake subsystem during surveys supporting the Final ESR.

A larger area of mapped caribou (Boreal population) Category 2 habitat within the Spirit Range is removed by the MD1 option (an additional 68.8 ha). The area of Category 3 caribou habitat removed by the MD1 is smaller (13.07 ha reduction) and no additional area of Category 1 caribou habitat is affected. The additional footprint area therefore increases the amount of cumulative disturbance in the Spirit Range, relative to the estimates provided in the Final ESR (Appendix E). The linear length of ROW increases by 8.76 km, which increases fragmentation effects and caribou predation risk. However, minimal changes to caribou movement and predation risk are expected along the 25 kV segment (6.96 km) because the ROW was adjusted to align with the existing community operated road between the Muskrat Dam Substation and Structure E89. Changes introduced by the MD1 do not alter the conclusions about the significance of adverse effects to caribou, relative to the predictions presented in the Final ESR (see Appendix E for further discussion of impacts to caribou).

No receptor points closer than those considered in the Final ESR relative to the substation were identified, so the assessment presented in the Final ESR is considered to be bounding of the potential effects of noise. Design and permitting for the substation will confirm noise levels are managed to the required limits.

Although the footprint area is larger, construction, operation, and maintenance activities for the MD1 Project footprint are predicted to have similar effects and mitigation to those described in Section 10.0 Net Effects Assessment of the Final ESR for the majority of the physical environment, biological environment, and socio-economic environment criteria. The one RFD that may intersect with the alignment is the Four First Nations Group All-Season Road (Section 4.0 of the Final ESR). This RFD intersected the Project footprint assessed in the Final ESR. The alignment of this all-season road in the area subject to this comparative analysis may be similarly adjusted to be aligned with the revised ROW or may be aligned with the existing winter road as defined in the Final ESR. Should the alignment of the road shift to be aligned with the revised ROW, the nature of cumulative effects are expected to be similar in type to that assessed above for the ROW; primarily, increased natural vegetation removal compared with the alignment considered in the Final ESR, with reduced effects related to sensitive land uses such as those defined to exist along the esker approaching the community. It is anticipated the road would also be required to consider proximity to sensitive areas, including areas identified to be avoided by the community, the buffer in proximity to bald eagle nests, and habitat for species at risk. In the event the road remains aligned with the existing winter road location, as assessed in the ESR, potential for cumulative effects is anticipated to be slightly greater than assessed in the Final ESR, where both alignments may require some clearing of vegetation, although the cumulative addition from development of the road aligned with the current winter road is anticipated to be small. Under either scenario related to the alignment in proximity of Muskrat Dam First Nation, cumulative effects are predicted to be similar in type of effects and mitigation to those described in Section 11.0 Cumulative Effects Assessment for the majority of the physical environment, biological environment and socio-economic environment criteria. Although the level of cumulative effect, particularly related to vegetation removal may be slightly greater than considered in the Final ESR, no significant adverse effect is anticipated.

The assessment of the potential effects of the Project that includes this route refinement reaches the same conclusions as for the EA criteria in Sections 5.0 to 8.0 and 11.0 of the Final ESR; and in consideration of implementation of the mitigation, commitments and monitoring in Section 12.0 and the Environmental and Social Management Plan in Section 9.0 of the Final ESR. Wataynikaneyap with their contractor(s) will adhere to all permits and approvals required for the Project. Therefore, in alignment with community preferences, the proposed MD1 Project footprint realignment is preferred for the area of Muskrat Lake First Nation.

In addition to implementing the revised route, Wataynikaneyap proposes an equivalent amendment to the limits of work area to each side of the 40-m-wide transmission line alignment ROW. The full set of metrics applied to the route revision comparison has been run against the limits of work area around MD1 and is presented in Appendix A (Table A-3). The limits of work area around MD1 intersects with the same metrics presented in Table 5, including intersection with areas of wetland, natural landcover areas, and similar wildlife areas. The 400 m buffer around a bald eagle nest location overlapping the 200 m Limits of Work buffer east of the revised ROW has been removed from the Limits of Work to avoid further encroachment in proximity of the nest location. Should buffer widths not be able to be maintained as identified, local MNDMNRF offices will be contacted for further discussion and appropriate First Nation communities notified, where requested. If additional changes within the Limits of Work would interact with areas of Species at Risk habitat not identified in current permitting, discussion with agencies to confirm amendments to permitting, including that any conditions can be met, would be required to proceed. Therefore, should Wataynikaneyap require realignment within the limits of work during construction, it is predicted that the potential effects will reach the same conclusions and consider implementation of the same commitments identified above.

3.1.2 Alignment along the connection to Bearskin Lake First Nation

The route for the Project segment identified as connection to Bearskin Lake First Nation (Appendix B - Figure 2) was refined based on input Wataynikaneyap has received through engagement with Bearskin Lake First Nation.

During the signing of the Section 28(2) Permit agreement, Bearskin Lake First Nation leadership requested a commitment that this section of line would be re-routed due to land use conflicts near the rapids/falls at the river crossing. Wataynikaneyap made a written commitment on September 24, 2019 to work on routing solutions with the community. Routing solution discussions, site visits by Wataynikaneyap and Valard, and geotechnical work were subsequently conducted and resulted in a formal letter of acceptance for the line route that is proposed in this document on March 29, 2021. The letter confirmed that the critical land-users had been engaged as part of the community's decision-making process.

The routing change was deemed necessary due to further consideration of existing harvest activity use of the original area, spiritual use of the area, and a planned future facility. Wataynikaneyap was instructed to proceed with the change as presented in this document through the letter included in Appendix D.

The alignment is presented in Appendix B, Figure 2.

A summary of key records of engagement with Bearskin Lake First Nation are presented in Table 3.

Table 3: Key Communication Summary - Alignment Along the Connection to Bearskin Lake First Nation

Date	Method of Communication	Summary
September 2019	Meeting with Community Leadership	Bearskin Lake First Nation leadership indicated they would sign necessary Section 28(2) permit agreement on the condition that Wataynikaneyap adjust the line route near the rapids/falls.
September 24, 2019	Letter	Wataynikaneyap confirmed a commitment to work with the community and seek line routing solutions at the requested location.
March 29, 2021	Letter	Bearskin Lake First Nation Chief and Council confirmed acceptance of proposed line route adjustment, indicate the appropriate land users have been involved in the decision, and directed Wataynikaneyap to proceed with the necessary approvals (see Appendix D).

As well, a new camp and laydown area was identified through direction of Bearskin Lake First Nation further from the community in response to social distancing and Covid-19 response. The revised camp and laydown area is presented in Appendix B, Figure 2.

A high-level baseline characterization for the amended Project footprint (BSL1) for the Bearskin Lake First Nation with comparison to the Project footprint assessed in the Final ESR for this segment of the Project (BSL2) is presented in Table 4. As well, a comparison of the amended camp and laydown location (BSL1-Camp) compared with the locations considered in the Final ESR (BSL2-Camp) is presented in Table 5. The full set of metrics considered for both the transmission line route and the camp location are presented in Appendix A.

Table 4: Corridor Refinement Analysis - Alignment along the Connection to Bearskin Lake First Nation

Key Factors	Corridor Refinements		Corridor Refinement Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 (Amended Project Footprint)	BSL2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	
Technical	**Size** ■ ROW is approximately 3.5 km in length. ■ The Project footprint has an area of approximately 13.9 ha.	**Size** ■ The ROW length is approximately 4.0 km in length. ■ The Project footprint has an area of 15.9 ha.	■ BSL1 has a slightly smaller Project footprint than BSL2.
Natural Environment	**Wetlands**[a] ■ The Project footprint crosses 2.3 ha of mapped wetlands.	**Wetlands**[a] ■ The Project footprint crosses 1.2 ha of mapped wetlands.	■ BSL1 crosses a larger area of mapped, unevaluated wetlands than the Project footprint of BSL2.
	Waterbodies and Watercourses[b] ■ The Project footprint crosses two mapped watercourses. ■ The Project footprint crosses two mapped waterbodies[c] for an area of 1.6 ha.	**Waterbodies and Watercourses**[b] ■ The Project footprint crosses one mapped watercourse. ■ The Project footprint crosses one mapped waterbody[c] for an area of 0.4 ha.	■ BSL1 crosses more waterbodies and watercourses than BSL2. BSL1 crosses a larger area of mapped waterbodies than BSL2.
	Vegetation[d] ■ The Project footprint crosses: ▪ 11.7 ha of natural landcover (terrestrial); and ▪ 0 ha of natural disturbance.	**Vegetation**[d] ■ The Project footprint crosses: ▪ 15.9 ha of natural landcover (terrestrial); and ▪ 0 ha of natural disturbance.	■ BSL1 crosses a smaller area of natural landcover than BSL2. Both BSL1 and BSL2 cross the same area of natural disturbance.

Key Factors	Corridor Refinements		Corridor Refinement Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 (Amended Project Footprint)	BSL2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	
Natural Environment (cont'd)	**Wildlife Habitat** ■ The Project footprint crosses 9.8 ha of potential suitable moose habitat. ■ The Project footprint crosses 3.8 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 6.3 ha of potential suitable bald eagle habitat. ■ The Project footprint crosses 2.7 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 1.4 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 6.8 ha of potential suitable olive-sided flycatcher habitat.	**Wildlife Habitat** ■ The Project footprint crosses 13.7 ha of potential suitable moose habitat. ■ The Project footprint crosses 0.5 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 9.6 ha of potential suitable bald eagle habitat and 3.7 ha is within 400 m of a mapped bald eagles nest. ■ The Project footprint crosses 4.6 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 2.1 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 9.6 ha of potential suitable olive-sided flycatcher habitat.	■ BSL1 crosses a smaller area of potential moose, bald eagle, Canada warbler, common nighthawk and olive-sided flycatcher habitat while the Project footprint of MD2 crosses a smaller area of potential horned grebe habitat.
	Threatened and endangered species or their habitat (Caribou (Boreal population)) ■ The Project footprint crosses 13.9 ha of mapped Category 3 habitat.	**Threatened and endangered species or their habitat (Caribou (Boreal population))** ■ The Project footprint crosses 15.9 ha of mapped Category 3 habitat.	■ BSL1 crosses a smaller area of Category 3 woodland caribou habitat than BSL2. Neither Project footprint cross Category 1 or Category 2 woodland caribou habitat nor spring or fall travel corridors.
	Threatened and endangered species or their habitat (Wolverine) ■ The Project footprint crosses 11.7 ha of potential wolverine habitat.	**Threatened and endangered species or their habitat (Wolverine)** ■ The Project footprint crosses 15.9 ha of potential wolverine habitat.	■ BSL1 crosses a smaller area of potential wolverine habitat than BSL2.

Key Factors	Corridor Refinements		Corridor Refinement Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 (Amended Project Footprint)	BSL2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	
Natural Environment (cont'd)	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 0.1 ha of potentially suitable little brown myotis maternity roost habitat.	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 1.1 ha of potentially suitable little brown myotis maternity roost habitat.	■ BSL1 crosses a smaller area of potentially suitable little brown myotis maternity roost habitat than BSL2.
Socio-economic	**Archaeology and Cultural Heritage** ■ The Project footprint 2.9 ha of land that has archaeological potential.	**Archaeology and Cultural Heritage** ■ The Project footprint 4.1 ha of land that has archaeological potential.	■ BSL1 crosses a smaller area of archaeological potential than the Project footprint for BSL2. Areas of archaeological potential crossed by the Project footprint will be subject to Stage 2 archaeological assessments (and Stage 3 and Stage 4, as required) prior to Project construction.
Traditional Land and Resource Use by Indigenous Communities	**Bearskin Lake First Nation and Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Three types of identified TLRU values, not classified as 'avoid'.	**Bearskin Lake First Nation and Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Three types of identified TLRU values, not classified as 'avoid'.	■ BSL1 aligns with the current community preference on the water crossing approaching the community.

a) All wetlands are understood to be unevaluated.

b) In employing a conservative approach, this assessment assumes that all waterbodies and watercourses have the potential to support fish and fish habitat.

c) Waterbodies not including watercourses.

d) Natural landcover (terrestrial) includes the following landcover classes: bog – open, bog – treed, fen – open, fen – treed, forest – dense coniferous, forest – dense deciduous, forest – dense mixed, forest – regenerating depletion and forest – sparse. Anthropogenic disturbance includes the following land cover classes: forest depletion – cuts and settlement/infrastructure. Natural disturbance includes the forest depletion – burns land cover class.

The proposed realignment (BSL1) was identified by Bearskin Lake First Nation community leadership through community engagement following approval of the EA and the 2019 EA Addendum. This revised alignment was identified as the preferred crossing location and reflecting avoidance of an area of rapids/falls at the river crossing where potential land use conflicts with the Project were identified. The proposed realignment results in a moderate increase in the length of the ROW (1.5 km) and a slight increase in the Project footprint area (2 ha). The Project footprint for BSL1 intersects a larger area of mapped unevaluated wetland and a smaller area of natural landcover compared with BSL2. BSL1 crosses a smaller area of potentially suitable habitat for moose, bald eagle, Canada warbler, common nighthawk, and olive-sided flycatcher habitat compared with BSL2, but crosses a larger area of potential habitat for horned grebe. The proposed realignment also crosses a smaller area of suitable wolverine

habitat and roosting area for Little Brown Myotis compared with BSL2. Potential for suitable habitat for bat hibernacula were considered through desktop analysis with low potential for habitat identified along BSL1 (see Appendix A). Potential habitat for bat hibernacula was not identified on the Pickle Lake subsystem during surveys supporting the Final ESR.

Table 5: Analysis – Camp and Laydown Area Bearskin Lake First Nation

Key Factors	Corridor Refinements		Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 – Camp (Amended Camp and Laydown)	BSL2 – Camp (Camp and Laydown Considered in the Final ESR and 2019 Addendum)	
Technical	**Size** ■ The Project footprint has an area of approximately 8.0 ha.	**Size** ■ The Project footprint has an area of 11.7 ha.	■ BSL1-Camp has a smaller Project footprint than BSL2 - Camp.
Natural Environment	**Vegetation**[(d)] ■ The Project footprint crosses: ▪ 8.0 ha area of mapped occurrences of provincially tracked vegetation species, ▪ 8 ha of natural landcover (terrestrial); and	**Vegetation**[(d)] ■ The Project footprint crosses: ▪ 11.4 ha area of mapped occurrences of provincially tracked vegetation species, ▪ 10.2 ha of natural landcover (terrestrial); and	■ BSL1-Camp crosses a smaller area of both mapped occurrences of provincially tracked vegetation species and natural landcover than BSL2 - Camp.

Key Factors	Corridor Refinements		Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 – Camp (Amended Camp and Laydown)	**BSL2 – Camp (Camp and Laydown Considered in the Final ESR and 2019 Addendum)**	
Natural Environment (cont'd)	**Wildlife Habitat** ■ The Project footprint crosses 8 ha of potential suitable moose habitat. ■ The Project footprint crosses 8 ha of potential suitable bald eagle habitat. ■ The Project footprint crosses 1.6 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 0 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 8.0 ha of potential suitable olive-sided flycatcher habitat.	**Wildlife Habitat** ■ The Project footprint crosses 9.2 ha of potential suitable moose habitat. ■ The Project footprint crosses 3.6 ha of potential suitable bald eagle habitat ■ The Project footprint crosses 3.2 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 0.9 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 3.6 ha of potential suitable olive-sided flycatcher habitat.	■ BSL1-Camp crosses a smaller area of potential moose and Canada warbler habitat, and a larger area of Bald Eagle, Olive-sided Flycatcher habitat.
	Threatened and endangered species or their habitat (Caribou (Boreal population)) ■ The Project footprint crosses 8.0 ha of mapped Category 3 habitat.	**Threatened and endangered species or their habitat (Caribou (Boreal population))** ■ The Project footprint crosses 11.7 of mapped Category 3 habitat.	■ BSL1–Camp crosses a smaller area of Category 3 woodland caribou habitat than BSL2 - Camp. Neither Project footprint cross Category 1 or Category 2 woodland caribou habitat nor spring or fall travel corridors.
	Threatened and endangered species or their habitat (Wolverine) ■ The Project footprint crosses 8.0 ha of potential wolverine habitat.	**Threatened and endangered species or their habitat (Wolverine)** ■ The Project footprint crosses 10.2 ha of potential wolverine habitat.	■ BSL1–Camp crosses a smaller area of potential wolverine habitat than BSL2 - Camp.

Key Factors	Corridor Refinements		Analysis
	Alignment along the Connection to Bearskin Lake First Nation		
	BSL1 – Camp (Amended Camp and Laydown)	**BSL2 – Camp (Camp and Laydown Considered in the Final ESR and 2019 Addendum)**	
Natural Environment (cont'd)	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 1.6 ha of potentially suitable little brown myotis maternity roost habitat.	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 2.3 ha of potentially suitable little brown myotis maternity roost habitat.	■ BSL1 - Camp crosses a smaller area of potentially suitable little brown myotis maternity roost habitat than BSL2 - Camp.
Socio-economic	**Archaeology and Cultural Heritage** ■ The Project footprint does not cross lands identified to represent archaeological potential.	**Archaeology and Cultural Heritage** ■ The Project footprint 3.5 ha of land that has archaeological potential.	■ BSL1 - Camp has no area of archaeological potential compared to an area of 3.5 ha recognized with BSI 2 - Camp
Traditional Land and Resource Use by Indigenous Communities	**Bearskin Lake First Nation** Project footprint crosses: ■ One types of identified TLRU values, not classified as 'avoid'.	**Bearskin Lake First Nation** Project footprint crosses: ■ One types of identified TLRU values, not classified as 'avoid'.	■ BSL1-Camp aligns with the current community preference and crosses the same mapped TLRU value as BSL2-Camp.

The proposed revised camp and laydown area (BSL1 - Camp) was proposed by the community of Bearskin Lake First Nation to support social distancing measures related to Covid-19. The proposed camp and laydown areas results in a slight decrease in the Project footprint area. The BSL1–Camp option crosses a smaller area of both mapped occurrences of provincially tracked vegetation species and natural landcover than BSL2–Camp. The BSL1-Camp crosses a smaller area of potential moose and Canada warbler habitat and crosses a larger area of Bald Eagle, Olive-sided Flycatcher habitat; and the BSL1–Camp also crosses a smaller area of Category 3 woodland caribou habitat, potential wolverine habitat and little brown myotis maternity roost habitat. Potential for suitable habitat for bat hibernacula were considered through desktop analysis with low potential for habitat identified within the BSL1-Camp area (see Appendix A). Potential habitat for bat hibernacula was not identified on the Pickle Lake subsystem during surveys supporting the Final ESR.

Construction, operation, and maintenance activities for the BSL1 Project footprint and BSL1-Camp location are predicted to have similar effects and mitigation to those described in Section 10.0 Net Effects Assessment of the Final ESR for the majority of the physical environment, biological environment, and socio-economic environment criteria. No RFDs are intersected by the proposed alignment within this section of the Project (Section 4.0 of the Final ESR), and therefore, cumulative effects are not anticipated. The assessment of the potential effects of the Project that includes this route refinement reaches the same conclusions as for the EA criteria in Sections 5.0 to 8.0 of the Final ESR; and in consideration of implementation of the mitigation, commitments and monitoring in Section 12.0 and the Environmental and Social Management Plan in Section 9.0 of the Final ESR. Wataynikaneyap with their contractor(s) will adhere to all permits and approvals required for the Project. Therefore,

in alignment with community preferences, the proposed BSL1 Project footprint realignment and BSL1-Camp location are preferred for the area of Bearskin Lake First Nation.

In addition to implementing the revised route, Wataynikaneyap proposes an equivalent amendment to the limits of work area to each side of the 40-m-wide transmission line alignment ROW around BSL1. The full set of metrics applied to the route revision comparison has been run against the limits of work area around BSL1 and is presented in Appendix A (Table A-3). The limits of work area around BSL1 intersects with the same metrics presented in Table 4, including intersection with areas of wetland, natural landcover areas, and similar wildlife areas. Should Wataynikaneyap require realignment within the limits of work during construction, it is predicted that the potential effects will reach the same conclusions and consider implementation of the same commitments identified above; however, it is recognized that changes to the footprint within the Limits of Work would require additional revisions to applicable permits prior to implementation.

3.1.3 Road, Camp and Laydown Areas in the vicinity of Kasabonika Lake First Nation

Through engagement with Kasabonika Lake First Nations Chief and Council, a change in the location of the temporary laydown, camp and road is proposed in the vicinity of Kasabonika Lake First Nation. As a result of the COVID-19 pandemic, the revised location was chosen to facilitate social-distancing efforts between construction crews and the surrounding community. The proposed revised temporary access road, camp and laydown areas are presented in Appendix B, Figure 3. A memo describing the location from Valard, along with a letter of support from Kasabonika Lake First Nation is provided in Appendix F.

The camp and laydown area is approximately 1.6 km away from the 440 m limits of work. The size of the camp and laydown area, which is approximately 5.37 ha, is required due to the amount of equipment and construction materials, the seasonality of the road and remoteness of the proposed Project. Existing ground conditions, access to the existing landfill, proximity to the airport and the distance to community of Kasabonika Lake First Nation were considered in determination of the preferred location. The site is an upland area with relatively level topography.

Within the assumptions in the environmental assessment, the temporary camp has an anticipated occupancy of approximately 50 people. Wastewater is anticipated to be managed through a septic field system. Potable water will be obtained from Kasabonika Lake or from the community and municipal waste will either be transported to the local landfill or incineration on site may be considered. Following construction activities for the project, the camp will be reclaimed as per the standards agreed upon between Wataynikaneyap, Valard and MNDMNRF.

A high-level baseline characterization for the amended Project footprint for the proposed road, camp and laydown areas comparison to the Project footprint assessed in the Final ESR for this segment of the Project is presented in Table 6. The full set of metrics considered is presented in Appendix A.

Table 6: Analysis – Road, Camps and Laydown Areas in the Vicinity of Kasabonika Lake First Nation

Key Factors	Camps and Laydown Areas Near Kasabonika Lake First Nation		Analysis
	KL1- Camp (Amended Project Footprint)	**KL2 – Camp (Project Footprint Considered in the Final ESR and 2019 Addendum)**	
Technical	**Size** ■ The Project footprint has an area of approximately 7.2 ha ■ 1 existing roads crossed by the Project footprint, and ■ 1 point where existing roads are crossed by the Project footprint (includes multiple crossings of the same road)	**Size** ■ The Project footprint has an area of 8.3 ha. ■ 1 existing roads crossed by the Project footprint, and ■ 1 point where existing roads are crossed by the Project footprint (includes multiple crossings of the same road)	■ KL1-Camp has a slightly smaller Project footprint than KL2–Camp.
Natural Heritage	**Vegetation**[(d)] ■ The Project footprint crosses: ▪ 7.1 ha area of mapped occurrences of provincially tracked vegetation species ▪ 7.1 ha of natural landcover (terrestrial)	**Vegetation**[(d)] ■ The Project footprint crosses: ▪ 8.3 ha area of mapped occurrences of provincially tracked vegetation species ▪ 8.2 ha of natural landcover (terrestrial)	■ KL1-Camp crosses a smaller area of both mapped occurrences of provincially tracked vegetation species and natural landcover than KL2-Camp.

Key Factors	Camps and Laydown Areas Near Kasabonika Lake First Nation		Analysis
	KL1- Camp (Amended Project Footprint)	**KL2 – Camp (Project Footprint Considered in the Final ESR and 2019 Addendum)**	
Natural Environment (cont'd)	**Wildlife Habitat** ■ The Project footprint crosses 0 ha of potential suitable moose habitat. ■ The Project footprint crosses 16.9 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 6.4 ha of potential suitable bald eagle habitat. ■ The Project footprint crosses 0.7 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 0.7 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses <0.1 ha of potential suitable olive-sided flycatcher habitat.	**Wildlife Habitat** ■ The Project footprint crosses 1.4 ha of potential suitable moose habitat. ■ The Project footprint crosses 32 ha of potential suitable horned grebe habitat. ■ The Project footprint crosses 1.4 ha of potential suitable bald eagle habitat ■ The Project footprint crosses 6.8 ha of potential suitable Canada warbler habitat. ■ The Project footprint crosses 6.8 ha of potential suitable common nighthawk habitat. ■ The Project footprint crosses 1.4 ha of potential suitable olive-sided flycatcher habitat.	■ KL1-Camp crosses a smaller area of potential moose, horned grebe, Canada warbler, common nighthawk and olive-sided flycatcher habitat while the Project footprint of KL1-Camp crosses a larger area of suitable habitat for bald eagle.
	Threatened and endangered species or their habitat (Caribou (Boreal population)) ■ The Project footprint crosses 7.2 ha of mapped Category 3 habitat.	**Threatened and endangered species or their habitat (Caribou (Boreal population))** ■ The Project footprint crosses 8.3 ha of mapped Category 3 habitat.	■ KL1-Camp crosses a smaller area of Category 3 woodland caribou habitat than KL2-Camp. Neither Project footprint cross Category 1 or Category 2 woodland caribou habitat nor spring or fall travel corridors.
	Threatened and endangered species or their habitat (Wolverine) ■ The Project footprint crosses 7.1 ha of potential wolverine habitat.	**Threatened and endangered species or their habitat (Wolverine)** ■ The Project footprint crosses 8.2 ha of potential wolverine habitat.	■ KL1- Camp crosses a smaller area of potential wolverine habitat than KL2 - Camp.

Key Factors	Camps and Laydown Areas Near Kasabonika Lake First Nation		Analysis
	KL1- Camp (Amended Project Footprint)	**KL2 – Camp (Project Footprint Considered in the Final ESR and 2019 Addendum)**	
Natural Environment (cont'd)	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 6.4 ha of potentially suitable little brown myotis maternity roost habitat.	**Threatened and endangered species or their habitat (Little brown myotis)** ■ The Project footprint crosses 0 ha of potentially suitable little brown myotis maternity roost habitat.	■ KL1 – Camp crosses a larger area of potentially suitable little brown myotis maternity roost habitat than KL2 - Camp.
Socio-economic	**Archaeology and Cultural Heritage** ■ The Project footprint 0 ha of land that has archaeological potential.	**Archaeology and Cultural Heritage** ■ The Project footprint 0.1 ha of land that has archaeological potential.	■ KL1- Camp crosses no areas containing archaeological potential.
Traditional Land and Resource Use by Indigenous Communities	**Kasabonika Lake First Nation** Project footprint crosses: ■ One type of identified TLRU values, not classified as 'avoid'.	**Kasabonika Lake First Nation** Project footprint crosses: ■ One type of identified TLRU values, not classified as 'avoid'.	■ KL1-Camp aligns with the current community preference on location of the camp.

The road, camp and laydown areas (KL1-Camp) were proposed in response to the COVID-19 pandemic and efforts to promote social distancing between the construction crew and local communities. The proposed camps and laydown areas result in a slight decrease in the Project footprint area. Similar with KL2-Camp, the Project footprint for KL1-Camp intersects an existing road at one point. The KL1–Camp option crosses a smaller area of both mapped occurrences of provincially tracked vegetation species and natural landcover than KL2–Camp option. The KL1-Camp option crosses a smaller area of potential moose, horned grebe, Canada warbler, common nighthawk and olive-sided flycatcher habitat while the Project footprint of KL1–Camp crosses a larger area of suitable habitat for bald eagle. KL1-Camp crosses a smaller area of Category 3 woodland caribou habitat than KL2-Camp. Neither Project footprint cross Category 1 or Category 2 woodland caribou habitat nor spring or fall travel corridors. KL1- Camp crosses a smaller area of potential wolverine habitat and a slightly larger area of potentially suitable little brown myotis maternity roost habitat than KL2-Camp. Potential for suitable habitat for bat hibernacula were considered through desktop analysis with low potential for habitat identified for the KL1-Camp area (see Appendix A). Potential habitat for bat hibernacula was not identified on the Pickle Lake subsystem during surveys supporting the Final ESR. KL1-Camp does not cross areas defined as having archaeological potential.

Construction, operation, and maintenance activities for the KL1- Camp Project footprint are predicted to have similar effects and mitigation to those described in Section 10.0 Net Effects Assessment of the Final ESR for the majority of the physical environment, biological environment, and socio-economic environment criteria. No RFDs are intersected by the proposed alignment within this section of the Project (Section 4.0 of the Final ESR), and therefore, cumulative effects are not anticipated. The assessment of the potential effects of the Project that

includes this route refinement reaches the same conclusions as for the EA criteria in Sections 5.0 to 8.0 of the Final ESR; and in consideration of implementation of the mitigation, commitments and monitoring in Section 12.0 and the Environmental and Social Management Plan in Section 9.0 of the Final ESR. Wataynikaneyap with their contractor(s) will adhere to all permits and approvals required for the Project. Therefore, in alignment with community preferences, the proposed KL1-Camp Project footprint is preferred for the area of Kasabonika Lake First Nation.

4.0 CONCLUSION

Overall, the potential effects and mitigation measures outlined in the Final ESR and through the 2019 Addendum effectively address the proposed design changes to the alignments of the identified segments of the 115-kV transmission line. The updated information presented in this comparative analysis do not change the results and conclusions of the net effects or cumulative effects assessments of the Final ESR. The proposed design changes do not introduce any additional project-environment interactions beyond those outlined in the Final ESR, as the potential effects of these proposed design changes are expected to be adequately addressed by the proposed mitigation measures described in the Final ESR. The proposed realignments reflect the preferences of the Indigenous communities local to the area of each revision, are technically and economically feasible and do not result in changes to the conclusions of the Final ESR.

Accordingly, aligned with community preferences, Wataynikaneyap intends to implement the MD1 and BSL1 route revisions, as well as the BSL1-Camp and KL1-Camp location options. For areas where the revised Project footprint will interact with areas of Species at Risk habitat not identified in current permitting, discussion with agencies to confirm amendments to permitting, including that any conditions can be met, are required to proceed.

5.0 REFERENCES

MNR (Ontario Ministry of Natural Resources). 2005. A Class Environmental Assessment for Provincial Parks and Conservation Reserves. December 31, 2004. ISBN: 0-7794-3848-5.

MNR. 2003. A Class Environmental Assessment for MNR Resource Stewardship and Facilities Development Project. Environmental Assessment Report Series. Queen's Printer for Ontario. Ontario, Canada.

Ontario Hydro. 1992. Class Environmental Assessment for Minor Transmission Facilities. Pursuant to the Environmental Assessment Act. Revision 6. Report No. 8

APPENDIX A

Metrics Tables

Table of Contents

TABLES

Table A-1: Corridor Analysis Factors and Metrics

Factor	Metric Category	Metric
Technical	Size	■ Total length of the 115-kV right-of-way (ROW) ■ Area of Project footprint (ha)
	Existing Infrastructure	■ Number of existing roads crossed by the Project footprint (number of separately identified roads) ■ Number of points where existing roads are crossed by the Project footprint (includes multiple crossings of the same road) ■ Number of other existing linear corridors crossed by the Project footprint (e.g., communication lines).
Natural Environment	Areas of Natural and Scientific Interest	■ Area of mapped candidate Areas of Natural and Scientific Interest (ANSI) (Earth Science and Life Science) in the Project footprint (ha)
	Wetlands[a]	■ Area of mapped wetlands in the Project footprint (ha)
	Waterbodies and Watercourses[b]	■ Number of mapped watercourses crossed by the Project footprint ■ Area of mapped waterbodies (not including watercourses) in the Project footprint (ha) ■ Number of mapped waterbodies (not including watercourses) crossed by the Project footprint
	Vegetation	■ Area of mapped occurrences of provincially tracked vegetation species in the Project footprint [c] (ha) ■ Area of Natural Landcover (Terrestrial), Anthropogenic Disturbance, and Natural Disturbance within the Project footprint[d]
	Wildlife Habitat	■ Area of suitable habitat (see Section 6.3 and Appendix 6.3B of the Final ESR for suitable habitat assumptions) for all wildlife criteria species (not Threatened or Endangered species) in the Project footprint (i.e., moose, horned grebe, bald eagle, Canada warbler, common nighthawk, and olive-sided flycatcher) (ha) ■ Area of mapped occurrences of potential habitat supporting provincially tracked wildlife species in the Project footprint [e] (ha) ■ Number of spawning sites crossed by the Project footprint ■ Number of fish and wildlife feeding or staging areas in the Project footprint
	Nesting Sites	■ Number of bald eagle nesting sites crossed by the Project footprint

Table A-1: Corridor Analysis Factors and Metrics

Factor	Metric Category	Metric
Natural Environment (cont'd)	Threatened and Endangered species or their Habitat	■ Area of mapped Caribou (boreal population) Category 1 high-use habitat (nursery areas) in the Project footprint (ha) ■ Area of mapped Caribou (boreal population) Category 1 high-use habitat (winter use areas) in the Project footprint (ha) ■ Area of mapped Caribou (boreal population) Category 1 high-use habitat (nursery and winter use area overlap) in the Project footprint (ha) ■ Area of mapped Caribou (boreal population) Category 2 seasonal range habitat in the Project footprint (ha) ■ Area of mapped Caribou (boreal population) Category 3 habitat in the Project footprint (ha) ■ Area of Caribou (boreal population) travel corridors (Spring; April) crossed by the Project footprint (ha) ■ Area of Caribou (boreal population) travel corridors (Fall; November) crossed by the Project footprint (ha) ■ Area of potential suitable wolverine habitat in the Project footprint (ha) (e) ■ Area of potential suitable maternity roosting habitat for little brown myotis in the Project footprint (ha) (e) ■ Number of bat hibernacula with confirmed use within 500m of the Project footprint (f)
Land Use, Resource Management	Land Designation	■ Area of Enhanced Management Areas within the Project footprint (ha) ■ Area of active, inactive, or abandoned mines in the Project footprint (ha) ■ Number of mining claims crossed by the Project footprint ■ Area of active mining claims in the Project footprint (ha) ■ Area of aggregate pits in the Project footprint (ha)
	Trails	■ Number of mapped trails (OTN and non-OTN(g) crossed by the Project footprint ■ Length of mapped trails (OTN and non-OTN) crossed by the Project footprint (km)
	Points of Reception	■ Number of potential receptor points within 1 km of a Project substation (h)
Socio-economic and Cultural	Tourism and Recreation	■ Existing buildings including trapper cabins crossed by the Project footprint ■ Area of tourism establishment areas crossed by the Project footprint (ha) ■ Recreation points crossed by the Project footprint (i) ■ Number of bait harvest areas (BHA) crossed by the Project footprint ■ Area of BHA crossed by the Project footprint (ha)
	Archaeology and Cultural Heritage	■ Number of archaeological sites crossed by the Project footprint (j) ■ Area of archaeological potential in the Project footprint (ha)

Table A-1: Corridor Analysis Factors and Metrics

Factor	Metric Category	Metric
Traditional Land and Resource Use by Indigenous Communities	Traditional Land and Resource Use, including spiritual or cultural sites[k]	■ Traditional land and resource use features shared by First Nations communities crossed by the Project footprint, classified as features to be avoided (e.g., burial sites).

Note:

a) All wetlands are understood to be unevaluated.

b) In employing a conservative approach, this assessment assumes that all waterbodies and watercourses have the potential to support fish and fish habitat.

c) Areas are considered based on "element and species occurrence and observation" datasets that record observations for species listed by MNRF as provincially tracked by the Natural Heritage Information Centre.

d) Natural landcover (terrestrial) includes the following landcover classes: bog – open, bog – treed, fen – open, fen – treed, forest – dense coniferous, forest – dense deciduous, forest – dense mixed, forest – regenerating depletion and forest – sparse. Anthropogenic disturbance includes the following land cover classes: forest depletion – cuts and settlement/infrastructure. Natural disturbance includes the forest depletion – burns land cover class.

e) Based on habitat modelling – see Section 6.3 of the Final ESR. Presence of potential bat maternity roost habitat was further refined through consideration of more detailed eFRI land use data by Valard along the area of routing revisions in 2020 and both findings are reported where relevant.

f) Potential hibernacula were identified within the ROW-limits of work. Three locations with identified use were confirmed though acoustic monitoring, present on the Red Lake subsystem as documented though the Information Gathering Form supporting *Endangered Species Act* permitting. Potential suitable habitat for hibernacula was further refined following approval of the Final ESR by Wataynikaneyap and their partners. Information from the AMIS (Abandoned Mines Information System) using 2014, 2016, and 2018 data, a search was performed for adit shafts, using wildcards. Using a LIDAR derived digital elevation model a search was performed for slopes with greater or equal to 15 degrees attributed to rocky or barren ecosites within eFRI data to identify potential suitable locations for hibernacula.

g) Mapped trails include non-OTN trails available through LIO. No OTN trails were identified as being crossed by the defined corridors.

h) Points of reception were identified considering LIO datasets defining the locations of buildings, as well as locations of structures defined through the traditional and resource use study.

i) Recreation points are defined as access points, beaches, boat caches of all types, boat houses, designated campsites and picnic sites.

j) Archaeological site data may not be released publicly without the express permission of the Ministry of Tourism, Culture, and Sport to protect the integrity of these sites.

k) See Section 8.0 of the Final ESR for further information on traditional land and resource use information collected for the Project.

ROW = right-of-way; km = kilometres; ha = hectares; ANSI = Area of Natural Significance and Interest; OTN = Ontario Trail Network; BHA = bait harvest areas.

Table A-2: Metrics Considered in the Comparative Analysis

Factor	Metric Category	Metrics	Pickle Lake Subsystem							
			Alignment near Muskrat Dam First Nation		Alignment near Bearskin Lake First Nation				Temporary Road, Camp and Laydown area near Kasabonika Lake First Nation	
			MD1 (Amended Project Footprint – ROW and access roads)	MD2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	BSL1 (Amended Project Footprint – ROW and access roads)	BSL2 (Project Footprint Considered in the Final ESR and 2019 Addendum)	BSL1-Camp (Amended Camp and Laydown)	BSL2 - Camp (Camp and Laydown Considered in the Final ESR and 2019 Addendum)	KL1-Camp	KL2-Camp
Technical	Size	Total length of the 115-kV ROW (km)	29.4	20.8	3.5	4.0	n/a	n/a	n/a	n/a
		Area of Project footprint (ha)	148.1	92.6	13.9	15.9	8.0	11.7	7.2	8.3
	Existing Infrastructure	Number of existing roads crossed by the Project footprint	3	1	0	0	0	0	1	1
		Number of points where existing roads are crossed by the Project footprint (includes multiple crossings of the same road)	3	1	0	0	0	0	1	1
		Number of other existing linear corridors crossed by the Project footprint (e.g., communication lines)	0	0	0	0	0	0	0	0
Natural Environment	Areas of Natural and Scientific Interest (ANSI)	Area of mapped candidate ANSI (Earth Science and Life Science) in the Project footprint (ha)	0	0	0	0	0	0	0	0
	Wetlands	Area of mapped wetlands[a] in the Project footprint (ha)	45.5	11.4	2.3	1.2	0	0	0	0
	Waterbodies and Watercourses[b]	Number of mapped watercourses crossed by the Project footprint	8.	3	2	1	0	0	0	0
		Area of mapped waterbodies (not including watercourses) in the Project footprint (ha)	2.3	0.8	1.6	0.4	0	0	0	0
		Number of mapped waterbodies (not including watercourses) crossed by the Project footprint	5	3	2	1	0	0	0	0
	Vegetation	Area of mapped occurrences of provincially tracked vegetation species in the Project footprint (ha)[c]	0	0	0	0	0	0	0	0
		Area of natural landcover[d] (terrestrial) within the Project footprint (ha)	139.1	89.4	11.7	15.9	8.0	10.2	7.1	8.2
		Area of anthropogenic disturbance[d] within the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of natural disturbance[d] within the Project footprint (ha)	20.2	0	0	0	0	0	0	0

	Wildlife Habitat	Area of suitable habitat for moose in the Project footprint (ha)	70.7	72.2	9.8	13.7	8.0	9.2	0	1.4
		Area of suitable habitat for horned grebe in the Project footprint (ha)	2.9	0.9	3.8	0.5	0	0	16.9	32.0
		Area of suitable habitat for bald eagle in the Project footprint (ha)	71.5	74.9	6.3	9.6	8.0	3.6	6.4	1.4
		Area of suitable habitat for Canada warbler in the Project footprint (ha)	75.7	50.2	2.7	4.6	1.6	3.2	0.7	6.8
Natural Environment (cont'd)	Wildlife Habitat (cont'd)	Area of suitable habitat for common nighthawk in the Project footprint (ha)	61.7	8.5	1.4	2.1	0	0.9	0.7	6.8
		Area of suitable habitat for olive-sided flycatcher in the Project footprint (ha)	75	76.5	6.8	9.6	8.0	3.6	<0.1	1.4
		Number of fish and wildlife feeding or staging areas	0	0	0	0	0	0	0	0
		Area of mapped occurrences of potential habitat supporting provincially tracked wildlife species in the Project footprint (ha) [(c)]	143.8	84.6	0	0	0	0	0	0
		Number of spawning sites crossed by the Project footprint	0	0	0	0	0	0	0	0
	Nesting Sites	Number of bald eagle nesting sites crossed by the Project footprint	0 (1 observed stick nest within 400 m)	0	0	0 (1 observed stick nest within 400 m)	0	0	0	0
	Threatened and Endangered species or their Habitat	Area of mapped Caribou (boreal population) Category 1 high-use habitat (nursery areas) in the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of mapped Caribou (boreal population) Category 1 high-use habitat (winter use areas) in the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of mapped Caribou (boreal population) Category 2 seasonal range habitat in the Project footprint (ha)	104.7	35.9	0	0	0	0	0	0
		Area of mapped Caribou (boreal population) Category 3 habitat in the Project footprint (ha)	43.4	56.5	13.9	15.9	8.0	11.7	7.2	8.3
		Area of Caribou (boreal population) travel corridors (Spring; April) crossed by the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of Caribou (boreal population) travel corridors (Fall; November)	0	0	0	0	0	0	0	0

		crossed by the Project footprint (ha)								
		Area of suitable wolverine habitat in the Project footprint (ha)[e]	142.5	84.6	11.7	15.9	8.0	10.2	7.1	8.2
		Area of suitable maternity roosting habitat for little brown myotis in the Project footprint (ha) [e]	Refined area calculated through eFRI:8.8 Area calculated based on LandCover in EA: 31.4	Refined area calculated through eFRI: 40.6 Area calculated based on LandCover in EA: 40.1	Refined area calculated through eFRI: 0.1 Area calculated based on LandCover in EA: 0.8	Refined area calculated through eFRI: 1.1 Area calculated based on LandCover in EA: 2.5	1.6	2.3	6.4	0
		Number of bat hibernacula confirmed within 500 m of the Project footprint [f]	Low potential identified though desktop analysis subsystem[f]	0	Low potential identified though desktop analysis subsystem[f]	0	Low potential identified though desktop analysis subsystem[f]	0	Low potential identified though desktop analysis subsystem[f]	0
Land Use, Resource Management	Land Designations	Area of Enhanced Management Areas within the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of active, inactive, or abandoned mines in the Project footprint (ha)	0	0	0	0	0	0	0	0
		Number of mining claims crossed by the Project footprint	0	0	0	0	0	0	0	0
		Area of active mining claims in the Project footprint (ha)	0	0	0	0	0	0	0	0
		Area of existing aggregate pits in the Project footprint (ha)	0	0	0	0	0	0	0	0
		Number of mapped trails crossed by the Project footprint [g]	0	0	0	0	0	0	0	0
		Length of mapped trails crossed by the Project footprint (km)	0	0	0	0	0	0	0	0
Socio-economic and cultural	Points of Reception	Number of potential receptor points within 1 km of a Project substation[h]	No substation within the area of the alignment		No substation within the area of the alignment		No substation within the area of the alignment		No substation within the area of the alignment	
	Tourism and Recreation	Existing buildings including trapper cabins crossed by the Project footprint	0	0	0	0	0	0	0	0
		Area of tourism establishment areas crossed by the Project footprint (ha)	0	0	0	0	0	0	0	0
		Recreation points crossed by the Project footprint [i]	0	0	0	0	0	0	0	0
		Number of BHA crossed by the Project footprint	0	0	0	0	0	0	0	0
		Area of BHA crossed by the Project footprint (ha)	0	0	0	0	0	0	0	0
	Archaeology and Cultural	Number of archaeological sites crossed by the Project footprint [j]	0	0	0	0	0	0	0	0

	Heritage	Area of archaeological potential (ha) within the Project footprint	7.4	18.7	2.9	4.1	0	3.5	0	0.1
Traditional Land and Resource Use by Indigenous Communities	Traditional Land and Resource Use, including spiritual or cultural sites[k]	Traditional land and resource use features shared by First Nations communities crossed by the Project footprint, classified as features to be avoided (e.g., burial sites)	**Muskrat Dam First Nation, Sachigo Lake First Nation, Kitchenuhmaykosib Inninuwug** Project footprint crosses: ■ Three types of identified TLRU values, not classified as 'avoid' at the EA stage. Features overlapped include areas the same as those overlapped by MD2. ■ This option reflects the post-EA direction from the community to avoid crossing the esker approaching the community.	**Muskrat Dam First Nation, Sachigo Lake First Nation, Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Four types of identified TLRU, not classified as 'avoid' at the EA stage.	**Bearskin Lake First Nation, Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ Three types of identified TLRU values, not classified as 'avoid'. Features overlapped include areas the same as those overlapped by BSL2 ■ This option reflects the post-EA direction from the community on the water crossing approaching the community.	**Bearskin Lake First Nation, Kitchenuhmaykoosib Inninuwug** Project footprint crosses: ■ The same three types of identified TLRU values as BSL1, not classified as 'avoid'.	**Bearskin Lake First Nation** Project footprint crosses: ■ One type of identified TLRU value, not classified as 'avoid'. Features overlapped include areas the same as those overlapped by BSL2-Camp. ■ This option reflects the post-EA direction from the community on placement of the camp.	**Bearskin Lake First Nation** Project footprint crosses: ■ One type of identified TLRU value as BSL1-Camp, not classified as 'avoid'.	**Kasabonika Lake First Nation** Project footprint crosses: ■ One type of identified TLRU value, not classified as 'avoid' at the EA stage. Features overlapped include areas the same as those overlapped by KL2-Camp. ■ This option reflects the post-EA direction from the community on placement of the camp.	**Kasabonika Lake First Nation** Project footprint crosses: The same type type of identified TLRU values as KL1-Camp, not classified as 'avoid'.

Note:
a) All wetlands are understood to be unevaluated.
b) In employing a conservative approach, this assessment assumes that all waterbodies and watercourses have the potential to support fish and fish habitat.
c) Areas are considered based on "element and species occurrence and observation" datasets that record observations for species listed by MNRF as provincially tracked by the Natural Heritage Information Centre.
d) Natural landcover (terrestrial) includes the following landcover classes: bog – open, bog – treed, fen – open, fen – treed, forest – dense coniferous, forest – dense deciduous, forest – dense mixed, forest – regenerating depletion and forest – sparse. Anthropogenic disturbance includes the following land cover classes: forest depletion – cuts and settlement/infrastructure. Natural disturbance includes the forest depletion – burns land cover class. Other-unknown is not reported.
e) Based on habitat modelling – see Section 6.3 of the Final ESR. Presence of potential bat maternity roost habitat was further refined through consideration of more detailed eFRI land use data by Valard along the area of routing revisions in 2020 and both findings are reported where relevant.
f) Potential hibernacula were identified within the ROW-limits of work. Three locations with identified use were confirmed though acoustic monitoring, present on the Red Lake subsystem as documented though the Information Gathering Form supporting *Endangered Species Act* permitting. Potential suitable habitat for hibernacula was further refined following approval of the Final ESR by Wataynikaneyap and their partners. Information from the AMIS (Abandoned Mines Information System) using 2014, 2016, and 2018 data, a search was performed for adit shafts, using wildcards. Using a LIDAR derived digital elevation model a search was performed for slopes with greater or equal to 15 degrees attributed to rocky or barren ecosites within eFRI data to identify potential suitable locations for hibernacula.
g) Mapped trails include non-OTN trails available through LIO. No OTN trails were identified as being crossed by the defined corridors.
h) Points of reception were identified considering LIO datasets defining the locations of buildings, as well as locations of structures defined through the traditional and resource use study.
i) Recreation points are defined as access points, beaches, boat caches of all types, boat houses, designated campsites and picnic sites.
j) Archaeological site data may not be released publicly without the express permission of the Ministry of Heritage, Sport, Tourism, and Cultural Industries to protect the integrity of these sites.
k) See Section 8.0 of the Final ESR for further information on traditional land and resource use information collected for the Project.
ROW = right-of-way; km = kilometres; ha = hectares; ANSI = Area of Natural Significance and Interest; OTN = Ontario Trail Network; BHA = bait harvest areas.

Table A-3: Limits of Work around Corridor Refinement Comparative Analysis Metrics

Factor	Metric Category	Metrics	**Alignment near Muskrat Dam First Nation** Within the Amended Limits of Work (200 m on either side of the MD1 40-m wide right-of-way)	**Alignment near Bearskin Lake First Nation** Within the Amended Limits of Work (200 m on either side of the 40-m wide BSL1 right-of-way)
Technical	Size	Total length of right-of-way (ROW) centreline (km)	29.4	3.5
		Area of Limits of Work (ha)	1299.8	160.4
	Existing Infrastructure	Number of existing roads within the Limits of Work	1	1
		Number of existing road crossings within the Limits of Work	1	1
		Number of other existing linear corridors crossed by the Limits of Work (e.g., communication lines)	0	1
Natural Environment	Areas of Natural and Scientific Interest	Area of mapped candidate Areas of Natural and Scientific Interest (ANSI) in the Limits of Work (ha)	0	0
	Wetlands[(a)]	Area of mapped wetlands in the Limits of Work (ha)	450.3	21.3
	Waterbodies and Watercourses[(b)]	Number of mapped watercourses crossed by the Limits of Work	6	1
		Number of mapped waterbodies crossed by the Limits of Work	5	2
		Area of mapped waterbodies (not including watercourses) in the Limits of Work (ha)	20.8	32.0
	Vegetation[(d)]	Area of mapped occurrences of provincially tracked vegetation species in the Limits of Work[(c)] (ha)	0	0
		Areas of natural landcover (terrestrial) within the Limits of Work (ha)	988.4	123.8
		Area of anthropogenic disturbance within the Limits of Work (ha)	195.5	0
		Area of natural disturbance within the Limits of Work (ha)	201.2	0.1

Table A-3: Limits of Work around Corridor Refinement Comparative Analysis Metrics

Factor	Metric Category	Metrics	**Alignment near Muskrat Dam First Nation** Within the Amended Limits of Work (200 m on either side of the MD1 40-m wide right-of-way)	**Alignment near Bearskin Lake First Nation** Within the Amended Limits of Work (200 m on either side of the 40-m wide BSL1 right-of-way)
Natural Environment (cont'd.)	Wildlife Habitat	Area of suitable habitat for moose in the Limits of Work (ha)	586.1	96.7
		Area of suitable habitat for homed grebe in the Limits of Work (ha)	25.1	68.5
		Area of suitable habitat for bald eagle in the Limits of Work (ha)	594.7	57.0
		Area of suitable habitat for Canada warbler in the Limits of Work (ha)	696.8	39.5
		Area of suitable habitat for common nighthawk in the Limits of Work (ha)	538.8	23.3
		Area of suitable habitat for olive-sided flycatcher in the Limits of Work (ha)	630.8	60.8
		Area of mapped occurrences of potential habitat supporting provincially tracked wildlife species in the Limits of Work (ha)	0	0
		Number of spawning sites crossed by the Limits of Work	0	0
		Number of fish and wildlife feeding or staging areas in the Limits of Work	0	0
	Nesting Sites	Number of bald eagle nesting sites crossed by the Limits of Work	0 (1 observed stick nest within 400 m)	0 (1 observed stick nest within 400 m)
	Threatened and Endangered species or their Habitat	Area of mapped woodland caribou Category 1 high-use habitat (nursery areas) in the Limits of Work (ha)	0	0
		Area of mapped woodland caribou Category 1 high-use habitat (winter use areas) in the Limits of Work (ha)	0	0
		Area of mapped woodland caribou Category 2 seasonal range habitat in the Limits of Work (ha)	881.6	0

Table A-3: Limits of Work around Corridor Refinement Comparative Analysis Metrics

Factor	Metric Category	Metrics	**Alignment near Muskrat Dam First Nation** Within the Amended Limits of Work (200 m on either side of the MD1 40-m wide right-of-way)	**Alignment near Bearskin Lake First Nation** Within the Amended Limits of Work (200 m on either side of the 40-m wide BSL1 right-of-way)
Natural Environment (cont'd.)	Threatened and Endangered species or their Habitat (cont'd)	Area of mapped woodland caribou Category 3 habitat in the Limits of Work (ha)	0	160.4
		Area of woodland caribou travel corridors (Spring; April) crossed by the Limits of Work (ha)	0	0
		Area of woodland caribou travel corridors (Fall; November) crossed by the Limits of Work (ha)	0	0
		Area suitable wolverine habitat in the Limits of Work (ha)	1183.8	123.9
		Area of suitable maternity roosting habitat for little brown myotis in the Limits of Work (ha)	Refined area calculated through eFRI: 12.2 Area calculated based on LandCover in EA: 317.5	Refined area calculated through eFRI: 6.6 Area calculated based on LandCover in EA: 12.5
		Number of bat hibernacula confirmed within 500 m of the Limits of Work[(f)]	Not surveyed No moderate to high potential for bat hibernacula was identified during review of the Final ESR footprint for the Pickle Lake subsystem	Not surveyed No moderate to high potential for bat hibernacula was identified during review of the Final ESR footprint for the Pickle Lake subsystem
Land Use, Resource Management Land Use	Land Designation	Area of Enhanced Management within the Limits of Work (ha)	0	0
		Area of active, inactive, or abandoned mines in the Limits of Work (ha)	0	0
		Number of mining claims crossed by the Limits of Work	0	0
		Area of active mining claims in the Limits of Work (ha)	0	0
		Area of aggregate pits in the Limits of Work (ha)	0	0
	Trails	Number of mapped trails crossed by the Limits of Work	0	0
		Length of mapped trails[(g)] crossed by the Limits of Work (km)	0	0

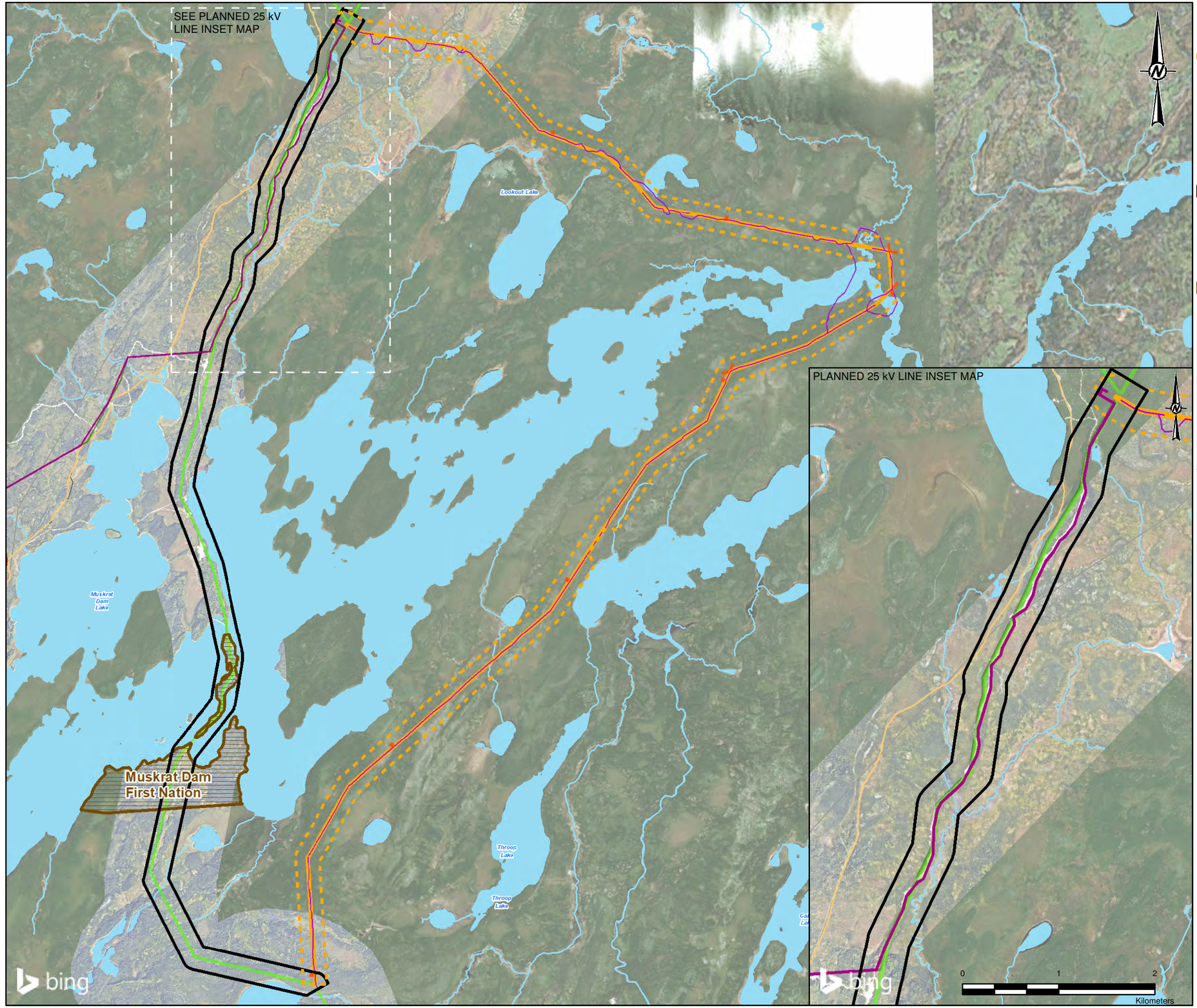
Table A-3: Limits of Work around Corridor Refinement Comparative Analysis Metrics

Factor	Metric Category	Metrics	**Alignment near Muskrat Dam First Nation** Within the Amended Limits of Work (200 m on either side of the MD1 40-m wide right-of-way)	**Alignment near Bearskin Lake First Nation** Within the Amended Limits of Work (200 m on either side of the 40-m wide BSL1 right-of-way)
Socio-economic and Cultural	Tourism and Recreation	Number of MNRF trapper cabin locations	0	0
		Area of tourism establishment areas crossed by the Project road footprint (ha)	0	0
		Recreation points crossed by the Limits of Work(i)	No substation within the area of the alignment	No substation within the area of the alignment
		Number of buildings within the Limits of Work	0	0
		Number of bait harvest areas (BHA) crossed by the Limits of Work	0	0
		Area of BHA crossed by the Limits of Work (ha)	0	0
	Archaeology and Cultural Heritage	Number of archaeological sites(j) crossed by the Limits of Work	0	0
		Area of archaeological potential in the Limits of Work (ha)	41.6	48.3
Traditional Land and Resource Use by Indigenous Communities	Traditional Land and Resource Use(k), including spiritual or cultural sites	Traditional land and resource use features shared by First Nation communities crossed by the Limits of Work, classified as features to be avoided (e.g., burial sites).	**Muskrat Dam First Nation, Sachigo Lake First Nation and Kitchenuhmaykoosib Inninuwug** Limits of work crosses: ■ The same three types of identified TLRU values as the Project footprint	**Bearskin Lake First Nation and Kitchenuhmaykoosib Inninuwug** Limits of work crosses: ■ The same three types of identified TLRU values as the Project footprint

Note:
a) All wetlands are understood to be unevaluated.
b) In employing a conservative approach, this assessment assumes that all waterbodies and watercourses have the potential to support fish and fish habitat.
c) Areas are considered based on “element and species occurrence and observation” datasets that record observations for species listed by MNRF as provincially tracked by the Natural Heritage Information Centre.
d) Natural landcover (terrestrial) includes the following landcover classes: bog – open, bog – treed, fen – open, fen – treed, forest – dense coniferous, forest – dense mixed, forest – regenerating depletion and forest – sparse. Anthropogenic disturbance includes the following land cover classes: forest depletion – cuts and settlement/infrastructure. Natural disturbance includes the forest depletion – burns land cover class.
e) Based on habitat modelling – see Section 6.3 of the Final ESR
f) Potential hibernacula were identified within the ROW-limits of work. Three locations with identified use were confirmed though acoustic monitoring, present on the Red Lake subsystem as documented though the Information Gathering Form supporting Endangered Species Act permitting.
g) Mapped trails include non-OTN trails available through LIO. No OTN trails were identified as being crossed by the defined corridors.
h) Points of reception were identified considering LIO datasets defining the locations of buildings, as well as locations of structures defined through the traditional and resource use study.
i) Recreation points are defined as access points, beaches, boat caches of all types, boat houses, designated campsites and picnic sites.
j) Archaeological site data may not be released publicly without the express permission of the Ministry of Heritage, Sport, Tourism, and Cultural Industries to protect the integrity of these sites.
k) See Section 8.0 of the Final ESR for further information on traditional land and resource use information collected for the Project.
ROW = right-of-way; km = kilometres; ha = hectares; ANSI = Area of Natural Significance and Interest; OTN = Ontario Trail Network; BHA = bait harvest areas.

APPENDIX B

Corridor Refinement Figures

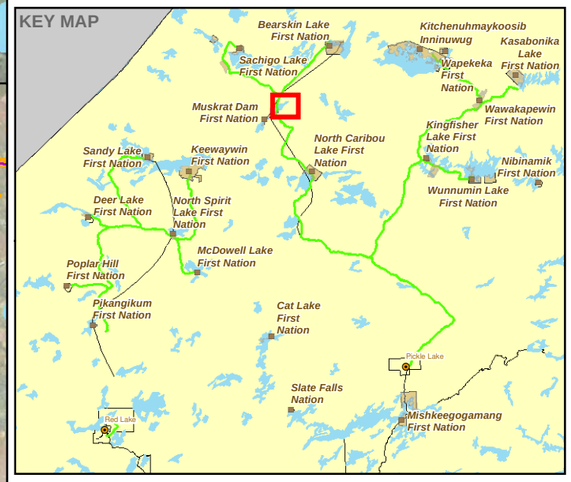


LEGEND

- Proposed 115 kV 40-m-wide Transmission Line Alignment Right-of-Way (ROW)
- Revised Limits of Work Boundary
- Planned 25 kV Line
- Planned Laydown and Helipad Sites
- Planned Access Roads

Current Project Footprint

- 115 kV 40-m-wide Transmission Line Alignment right-of-way (ROW)
- Community Distribution 25 kV Line 40-m-wide right-of-way (ROW)
- Limits of Work Boundary
- Local Roads
- Winter Roads
- Communication Line
- Watercourse
- Waterbody
- First Nations Reserve



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1:70,000 Kilometers

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT FOR ENGINEERING PURPOSES.

REFERENCE(S)

1. BASE DATA - MNR LIO, OBTAINED 2016/2017, NTDB
2. TRANSMISSION ROUTES - PROVIDED BY WATAYNIKANEYAP POWER L.P.
3. FIRST NATION COMMUNITIES FROM INDIGENOUS AND NORTHERN AFFAIRS CANADA (WWW.AINC-INAC.GC.CA)
4. PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2016
5. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 15

CLIENT

WATAYNIKANEYAP POWER L.P.

PROJECT

PHASE 2: CONNECTING 17 REMOTE FIRST NATION COMMUNITIES

TITLE

ALIGNMENT APPROACHING MUSKRAT DAM FIRST NATION

CONSULTANT

YYYY-MM-DD	2021-08-04
DESIGNED	SO
PREPARED	SO
REVIEWED	JMC
APPROVED	BT

PROJECT NO.	CONTROL	REV.	MAP
1544751	-	-	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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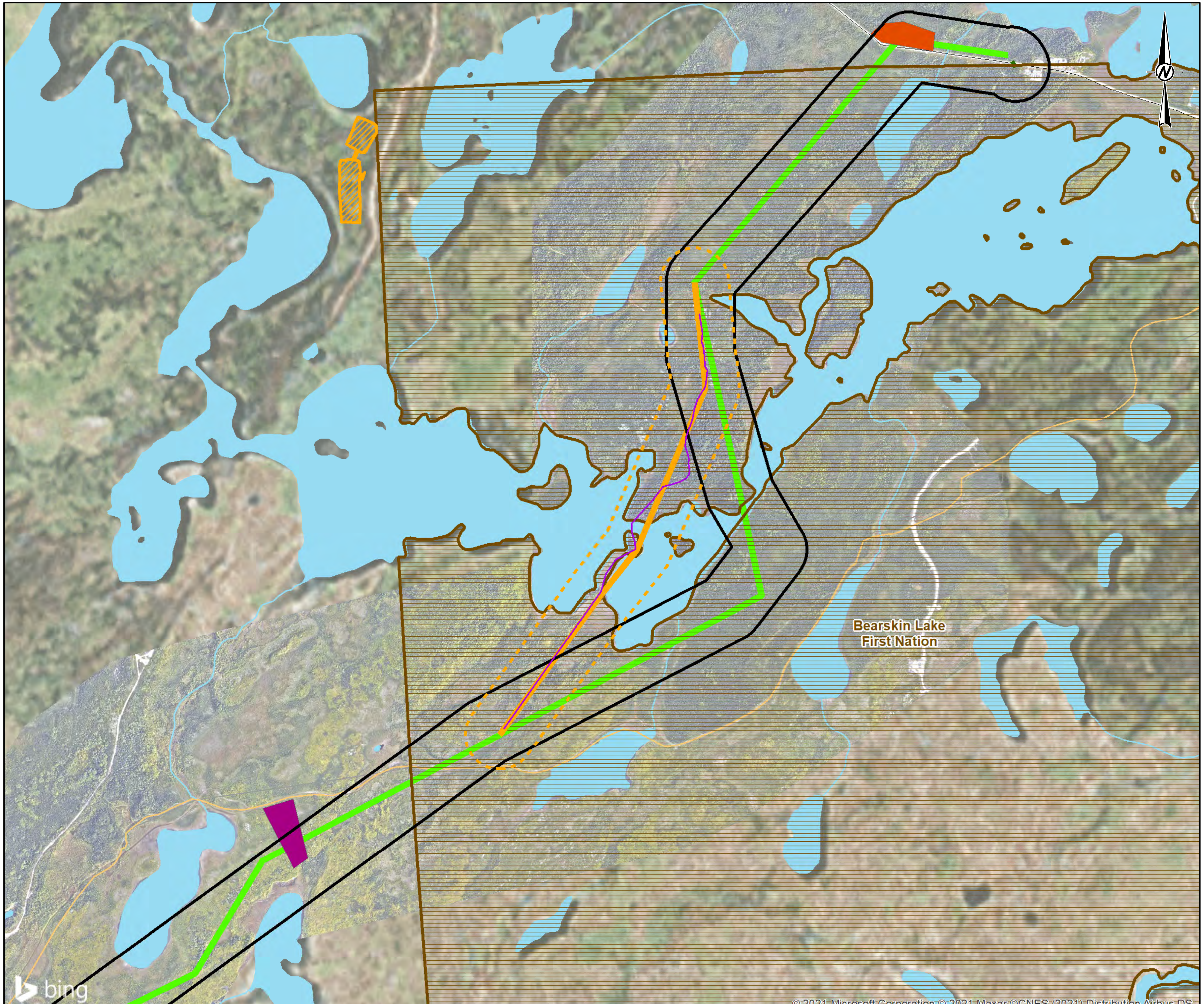
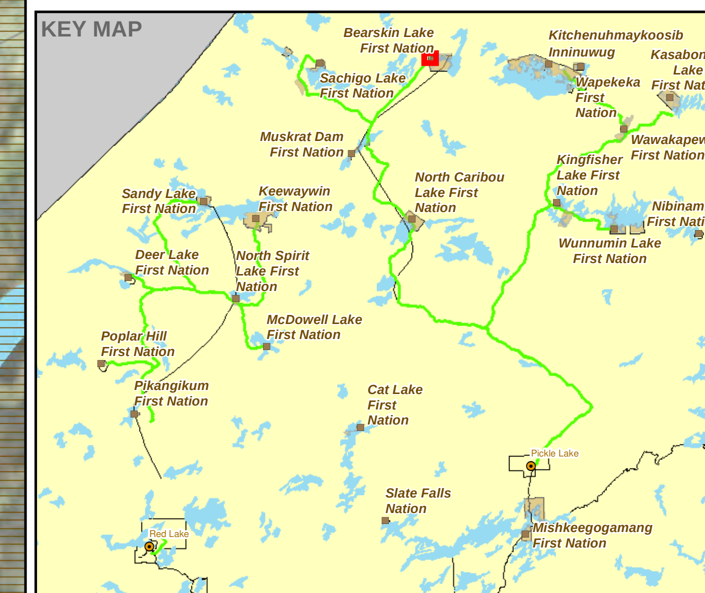


LEGEND

- Proposed 115 kV 40-m-wide Transmission Line Alignment Right-of-Way (ROW)
- Proposed Temporary Camp/Laydown
- Revised Limits of Work Boundary Planned
- Access

Current Project Footprint

- 115 kV 40-m-wide Transmission Line Alignment right-of-way (ROW)
- Community Distribution 25 kV Line 40-m-wide right-of-way (ROW)
- Limits of Work Boundary
- Planned Temporary Construction Camp
- Planned Temporary Laydown
- Local Roads
- Winter Roads
- Communication Line
- Watercourse
- Waterbody
- First Nations Reserve



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1:25,000 Kilometers

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT FOR ENGINEERING PURPOSES.

REFERENCE(S)

1. BASE DATA - MNR LIO, OBTAINED 2016/2017, NTDB
2. TRANSMISSION ROUTES - PROVIDED BY WATAYNIKANEYAP POWER L.P.
3. FIRST NATION COMMUNITIES FROM INDIGENOUS AND NORTHERN AFFAIRS CANADA (WWW.AINC-INAC.GC.CA)
4. PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2016
5. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 15

CLIENT
WATAYNIKANEYAP POWER L.P.

PROJECT
PHASE 2: CONNECTING 17 REMOTE FIRST NATION COMMUNITIES

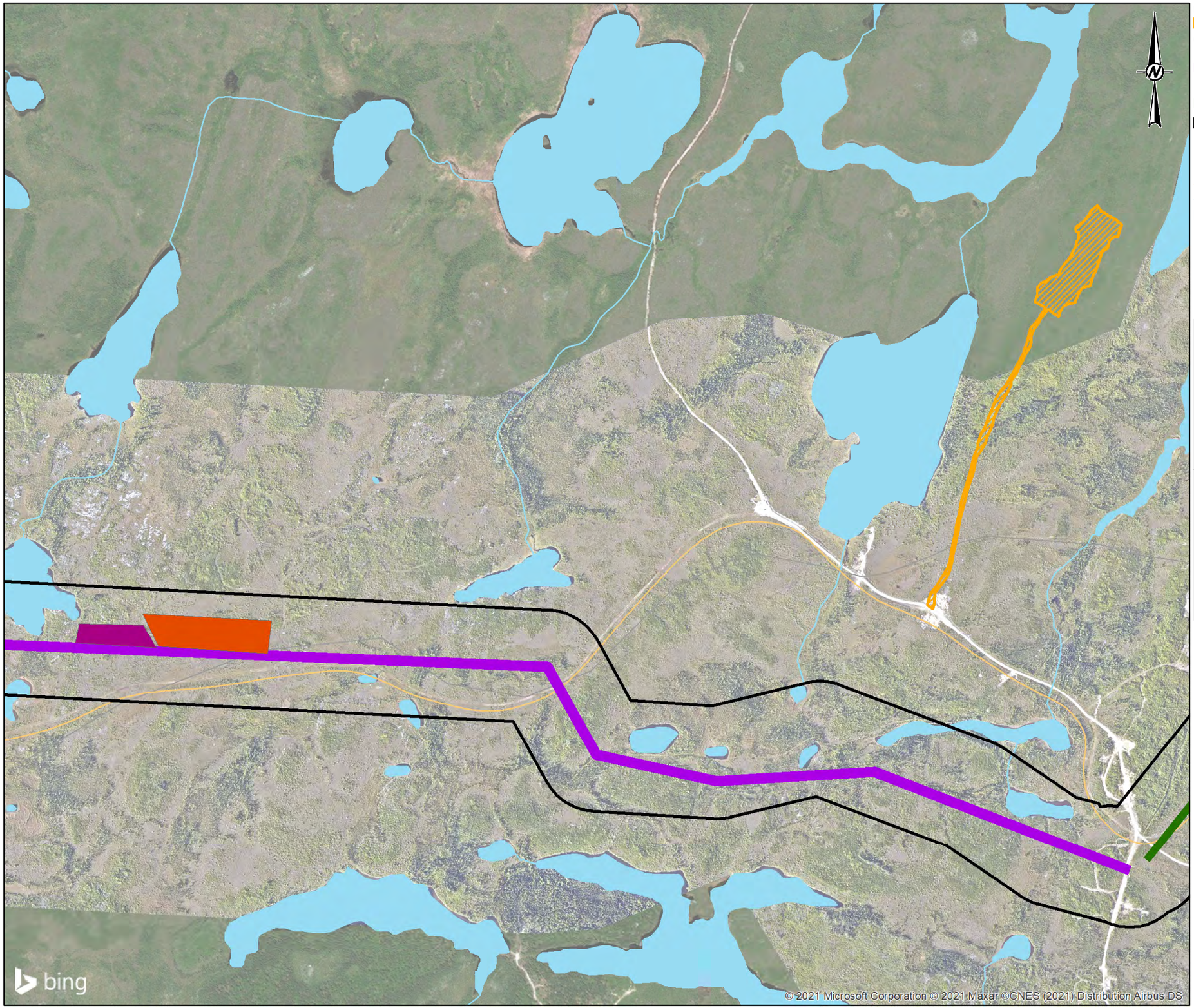
TITLE
ALIGNMENT APPROACHING BEARSKIN LAKE FIRST NATION

CONSULTANT

YYYY-MM-DD	2021-08-04
DESIGNED	SO
PREPARED	CGE
REVIEWED	BT
APPROVED	BT

PROJECT NO.	CONTROL	REV.	MAP
1544751	-	-	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm



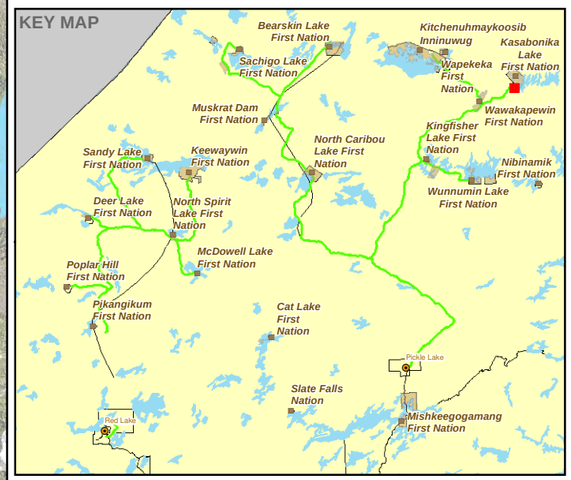
LEGEND

- Proposed Temporary Camp/Laydown

Current Project Footprint

- 44 kV 40-m-wide Transmission Line Alignment right-of-way (ROW)
- Community Distribution 25 kV Line 40-m-wide right-of-way (ROW)
- Limits of Work Boundary
- Planned Temporary Construction Camp
- Planned Temporary Laydown Area
- Winter Roads
- Communication Line
- Watercourse
- Waterbody

KEY MAP



0 0.45 0.9

1:15,000 Kilometers

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT FOR ENGINEERING PURPOSES.

REFERENCE(S)

1. BASE DATA - MNR LIO, OBTAINED 2016/2017, NTDB
2. TRANSMISSION ROUTES - PROVIDED BY WATAYNIKANEYAP POWER L.P.
3. FIRST NATION COMMUNITIES FROM INDIGENOUS AND NORTHERN AFFAIRS CANADA (WWW.AINC-INAC.GC.CA)
4. PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2016
5. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 15

CLIENT
WATAYNIKANEYAP POWER L.P.

PROJECT
PHASE 2: CONNECTING 17 REMOTE FIRST NATION COMMUNITIES

TITLE
Camp Location in the Vicinity of Kasabonika Lake First Nation

CONSULTANT

YYYY-MM-DD	2021-08-04
DESIGNED	SO
PREPARED	CGE
REVIEWED	BT
APPROVED	BT

PROJECT NO.	CONTROL	REV.	MAP
1544751	-	-	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B (279mm x 432mm)

APPENDIX C

Correspondence of Support for Route Revision from Muskrat Dam First Nation

MUSKRAT DAM FIRST NATION

P.O. BOX 140
MUSKRAT DAM, ONTARIO P0V 3B0
(807) 471-2573 Fax (807) 471-2540 - Administration
(807) 471-2574 Fax (807) 471-2699 - Main Office

Dear Margaret Kenequanash,

This letter is written confirmation of the direction provided to Wataynikaneyap Power LP (Wataynikaneyap) by Muskrat Dam First Nation (MRD) leadership over the course of several meetings since November 11, 2020, and most recently on March 11, 2021 during a helicopter flight.

MRD held a community meeting on February 2, 2021 to discuss the line routing that was also attended by key land stewards. Several acceptable alternative routes were identified (red and blue routes on the map below). This letter is confirming our engagement with the community members and the landusers on those routes.

We have reviewed Wataynikaneyap and Valard's proposed adaptation that was provided on March 15, 2021 route (as shown on the map on the next page). It is similar to the southern portion of the blue route and the northern portion of the red.

We would like to thank you for arranging a helicopter flight to review the area between the Severn River and the Substation. We are in agreement with the March 15, 2021 route and are providing instruction for Wataynikaneyap to proceed with the next steps in implementing that route as quickly as possible.

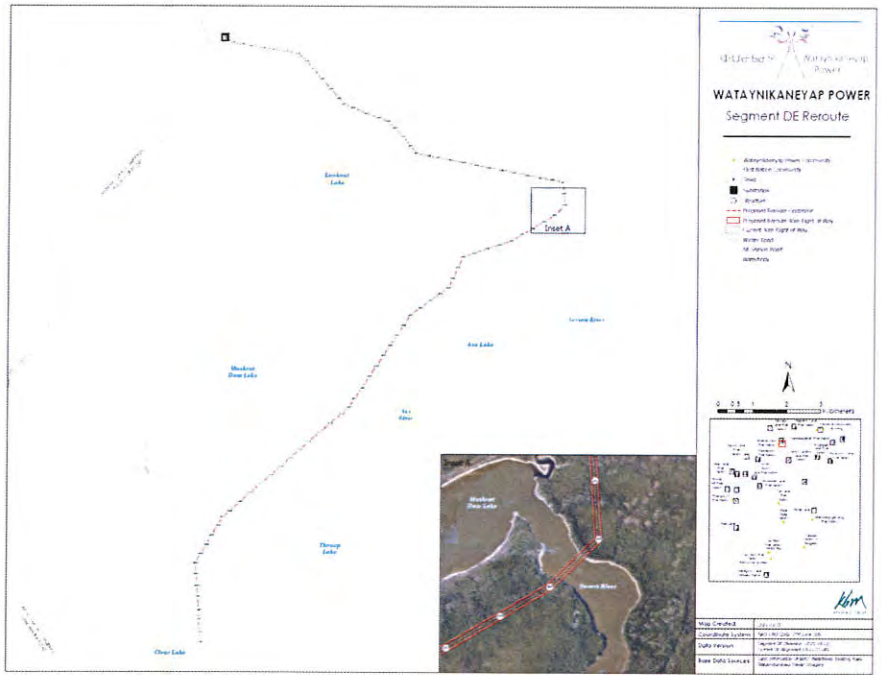
Miigwetch,

Chief Gordon Beardy

DocuSigned by:
Juan Anderson
9BF91D2471E9496...

RECEIVED March 23, 2021

March 15, 2021 Line Route Adjustment



APPENDIX D

Correspondence of Support for Route Revision from Bearskin Lake First Nation

BEARSKIN LAKE FIRST NATION

BOX 25
BEARSKIN LAKE, ON
P0V 1E0
TELEPHONE # (807) 363-2518/2598
FAX # (807) 363-1066

March 29, 2021

Dear Margaret Kenequanash,

This letter is a written confirmation from Bearskin Lake First Nation Chief and Council (Bearskin) to Wataynikaneyap Power LP (Wataynikaneyap) to proceed with the line route adjustment shown on the attached map in blue, provided on March 29, 2021.

As you are aware, the need for a line route adjustment was raised by the previous Bearskin administration when signing off on the Section 28(2) permit in September of 2019. Wataynikaneyap issued a letter to Bearskin on September 24, 2019 indicating a commitment to continue dialogue on the matter and seek solutions. The solution has now been met from the community's perspective. This letter is confirming our engagement with the community members and the land-users on the preferred route.

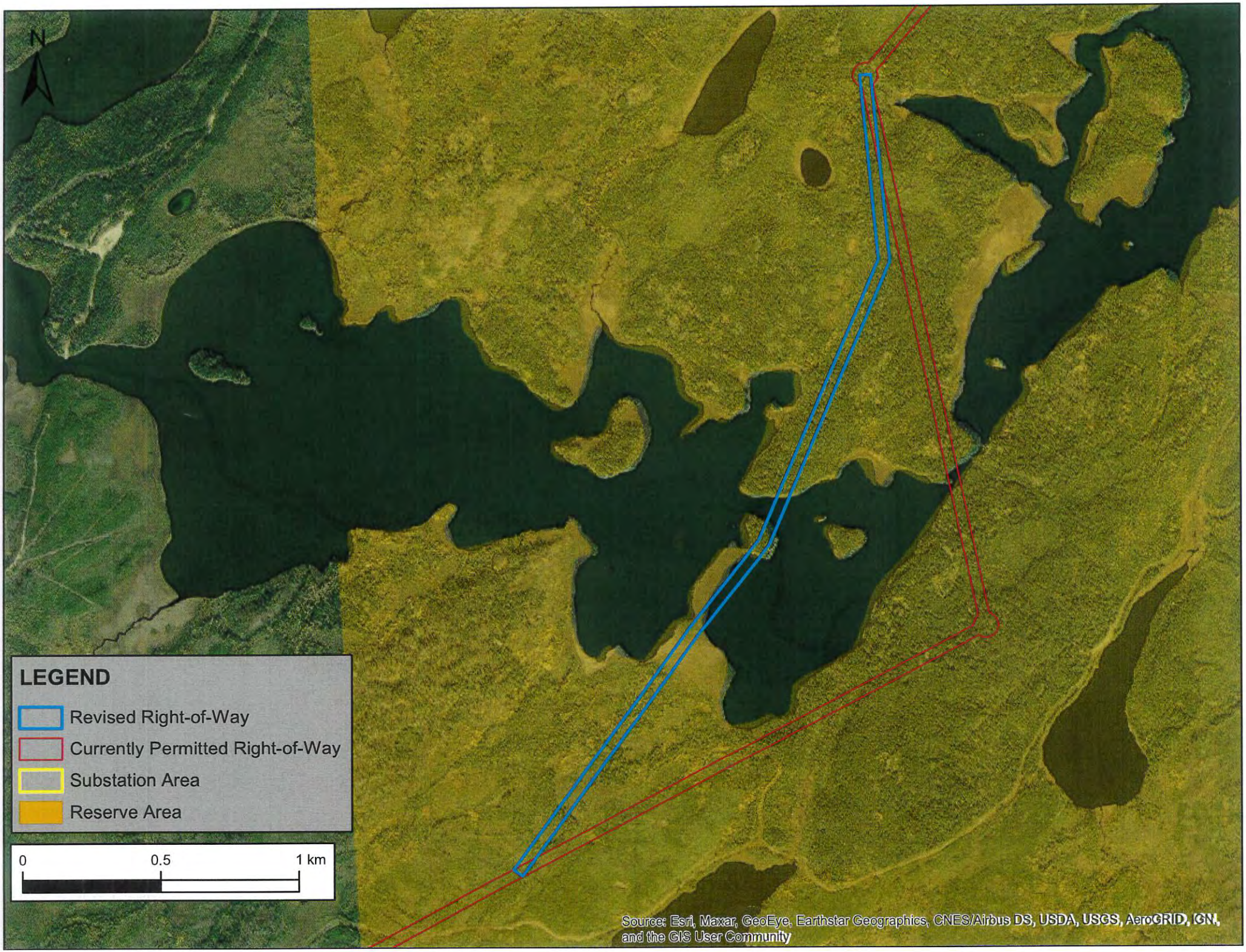
We understand that Valard has recently completed an investigation of the community's preferred re-route (blue line) which confirmed its viability.

Please proceed with the approvals processes to formalize this change as quickly as possible.

We would like to thank you for your team's attention to this matter and for preserving the rapids area for other important community uses.

Miigwetch,

Chief Lefty Kamenawatamin, on behalf of Chief and Council


N
LEGEND
Revised Right-of-Way
Currently Permitted Right-of-Way
Substation Area
Reserve Area
0
0.5
1 km
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, GN, and the GIS User Community

APPENDIX E

Caribou Comparative Analysis

1.0 INTRODUCTION

This appendix provides additional evidence to support conclusions about Forest Dwelling Caribou (*Rangifer tarandus caribou*) presented in the revised *2021 Comparative Analysis – Muskrat Dam and Bearskin Lake*. This analysis considers potential effects to the Spirit Range as result of:

- Re-routing the ROW alignment and related access roads for the 115-kV transmission line along the connection to Muskrat Dam First Nation (Appendix B, Figure 1).
- Temporary workspaces (pull sites and laydown areas) required to support construction of the rerouted 115-kV transmission line (Appendix B, Figure 1).
- Maintaining the 25-kV line connection to Muskrat Dam First Nation, which will no longer run in parallel to the 115-kV line (Appendix B, Figure 1).

This appendix was also completed considering comments and questions received from the Ministry of the Environment, Conservation and Parks (MECP).

2.0 CARIBOU COMPARATIVE ANALYSIS

2.1 Existing Conditions

Existing conditions for the Spirit Range, which is the range area within which changes in the vicinity of Muskrat Dam First Nation are located, are described in detail in the *Final ESR* (Appendix 6.3C, Section 6.3C3.0). Provided below is a summary of existing conditions as context for the comparative analysis:

- Recent and historical caribou observations for the Spirit Range show caribou occurrence records concentrated in the central portion of the range (MNRF 2014a). Similarly, the probability of occupancy in the Spirit Range is high in the centre of the range which is characterized by a large peatland complex east of Sandy Lake (MNRF 2014a).
- Twenty-one known nursery areas have been delineated in the Spirit Range and are predominantly distributed in the central portion of the range.
- Seven winter use areas have been delineated in the Spirit Range.
- Movement paths identified using collar location data occur primarily in the central portion of the range and along the southwestern range boundary. These include six delineated potential linkages (seasonal travel corridors).
- Fragmentation in the Spirit Range is limited, with an estimated linear feature density of 0.03 km/km^2. Most fragmentation is induced by fire disturbance.
- The Spirit Range was historically affected by an aggressive fire regime and a high frequency of blowdown events, and these factors continue to be the main drivers of habitat availability (MNRF 2014a, 2017).
- At the beginning of 2017, the Spirit Range was considered 29.6% disturbed, with the majority (25.3%) comprising natural disturbances (MNRF 2017). Natural disturbances therefore represent the largest disturbance in the range.
- Information provided by the MECP on June 24, 2021 indicates that the estimated cumulative disturbance for the Spirit Range for 2015 was higher, with an estimate of 30.1% cumulative disturbance in Spirit Range. The change among years is most likely attributable to fire disturbances being removed from the landscape once they reached 40 years of age.

- In 2009 and 2010, the Spirit caribou population had a minimum animal count of 373 according to winter distribution surveys (MNRF 2014a). The population likely exceeds 400 individuals (MNRF 2014a).
- Average annual adult female survival, measured between 2009 and 2012, was 0.88 (range = 0.75-1.00) (MNRF 2014a). Annual calf recruitment estimates between 2010 and 2012 ranged from 12.51 to 41.05 calves per 100 females and the estimated mean annual population growth rate (λ) between 2009 and 2011 was 0.95 (range = 0.93-1.06) (MNRF 2014a). The population is likely declining slightly.
- The moose density estimate from 2015 in Wildlife Management Unit (WMU) 1C, which overlaps with the Spirit Range, was 7.0 moose/100 km^2 (Government of Ontario 2016). Wolf densities are not available. Caribou populations are unlikely to remain stable when moose densities are sufficient to support more than 6.5 wolves per 1,000 km² (Bergerud and Elliot 1986). Moose densities of approximately 11 moose per 100 km^2 are likely to support such wolf densities (Bergerud and Elliot 1986).

As per guidance in the *Integrated assessment protocol for woodland caribou ranges in Ontario* (MNRF 2014b), the Ministry of Natural Resources and Forestry (MNRF) considered three lines of quantitative evidence (population size, population trend, and disturbance assessment) to inform an integrated risk assessment that enabled the determination of range condition (MNRF 2014a). The MNRF determined that it is likely that the Spirit Range can sustain the caribou population based on the level of disturbance in the range. However, when considering all factors in the integrated risk assessment process the MNRF determined that it is uncertain if the range condition is sufficient to sustain the Spirit caribou (MNRF 2014a).

The *Final ESR* concluded that caribou are likely to be within their limits of resilience and adaptive capacity, but due to the uncertainty around range conditions (identified in MNRF 2014a) the *Final ESR* concluded that it is uncertain if the Spirit caribou are self-sustaining under existing conditions. Low calf recruitment is likely the main factor limiting caribou survival and reproduction under existing conditions.

2.2 Project Changes

Together, the proposed changes to the Project along the re-aligned segments will:

- Not change the amount of Category 1 Caribou habitat (nursery areas or winter use areas) removed by the Project.
- Increase the amount of Category 2 Caribou habitat removed, from 35.86 ha to 104.66 ha. This corresponds to an increase of 68.8 ha.
- Decrease the amount of Category 3 Caribou habitat removed, from 56.45 ha to 43.38 ha. This corresponds to a decrease of 13.07 ha.
- Increase the net removal of caribou habitat (Category 2 and 3 habitats combined) by 55.73 ha.
- Introduce additional fragmentation along the newly rerouted 115-kV transmission line right of way (ROW). The linear length of ROWs increased from 20.63 km to 29.39 km, adding approximately 8.76 km of fragmentation on the landscape. However, minimal effects of fragmentation are expected along the 6.96 km of 25-kV ROW because it is aligned with an existing community operated road between the Muskrat Dam Substation and Structure E89 (Appendix B, Figure 1). Fragmentation effects along the rerouted 115-kV transmission line (measuring 22.43 km) could influence the local movement patterns of caribou, particularly during construction when sensory disturbance will be highest. No barrier effects are predicted across the 115-kV ROW given caribou's movement capability and their ability to cross different types of anthropogenic disturbances.
- Increase linear disturbance on the landscape by 8.76 km, which could improve wolf travel efficiency along the ROWs. However, available information suggests that in this northern area moose densities are too low to support wolf densities that could potentially threaten caribou persistence. Nonetheless, the risk of caribou predation could be incrementally higher on or near the ROWs. Little to no change in

predation risk is expected along the 25-kV line ROW (i.e., over 6.98 km) because it is aligned with an existing community operated road between the Muskrat Dam Substation and Structure E89.

- Increase the area of caribou habitat that is indirectly affected by the Project (i.e., within a 500 m buffer from the Project footprint) from 2,144.69 ha to 3,840.80 ha[1]. This corresponds to an increase of 1,696.11 ha.
- Increase the amount of cumulative disturbance in the Spirit Range:
    - The Project footprint will remove an additional 55.73 ha of habitat.
    - The Project will indirectly affect an extra 1,696.11 ha of habitat around the footprint[1].
    - The net increase in cumulative disturbance is 1,751.84 ha, which corresponds to 0.04 % of the Spirit Range (the total range area is 4,668,532 ha [MNRF 2017]).
    - The incremental change in cumulative disturbance in the Spirit Range will not bring the range past the 35% management threshold.

3.0 CONCULSION

As described above, the changes resulting from the modified Project design represent an incremental increase in potential effects to caribou relative to what was predicted in the *Final ESR*. Specifically, there will be changes to caribou habitat availability (habitat loss) and caribou habitat distribution (fragmentation), and possible changes to caribou movement and survival. All mitigation commitments outlined in the *Final ESR* (Section 6.3 [Wildlife], Table 6.3-10) and those identified in Wataynikaneyap's *Endangered Species Act* (ESA) Permit# NR-19PD-001-19 will continue to be implemented to minimize effects to caribou.

The addition of habitat loss and fragmentation in the Spirit Range could incrementally reduce the range condition, which in turn could incrementally increase the risk to caribou in the range (i.e., decreases the likelihood that caribou occupying the range are self-sustaining). However, given the magnitude of changes described and assuming effective implementation of mitigation measures, it is unlikely that the Spirit Range condition will be measurably altered as a result of the Project modifications. The level of cumulative disturbance will increase by 0.04% and will remain below 35%, suggesting that the Spirit Range is likely to continue sustaining the caribou population based on the level of disturbance in the range. The Project changes are not anticipated to alter the self-sustainability and ecological effectiveness of the Spirit Range population. Consistent with the predictions in the *Final ESR*, the self-sustaining status of the Spirit Range population will remain "uncertain" (MNRF 2014a) when considering all factors in the integrated risk assessment; however, the population is expected to remain ecologically effective. Consequently, the combined effects from the Project (including the modifications described herein) and previous and existing cumulative disturbance are predicted to be not significant.

[1] The calculated areas inside the 500m buffers includes portions that overlap with other existing natural or anthropogenic disturbance and their 500m buffer (e.g., the community access road between the Muskrat Dam Substation and Structure E89). The estimated amount of indirect habitat disturbance is therefore considered a conservative overestimate of the potential effect.

4.0 REFERENCES

Bergerud A.T., and J.P. Elliot. 1986. Dynamics of caribou and wolves in northern British Columbia. Canadian Journal of Zoology 64(7): 1515-1529.

MNRF (Ministry of Natural Resources and Forestry). 2014a. Integrated range assessment for woodland caribou and their habitat in the Far North of Ontario: 2013. Species at Risk Branch, Thunder Bay, Ontario xviii + 124 pp.

MNRF. 2014b. Integrated assessment protocol for woodland caribou ranges in Ontario. Species at Risk Branch, Thunder Bay, Ontario, vii + 95pp.

MNRF. 2017. Ontario's Woodland Caribou Conservation Plan – Draft cumulative effects assessment and proposal screening report. CST-EOI-2017-10-30-1, Spirit Range. October 30, 2017, 13 pp.

APPENDIX F

Kasabonika Temporary Camp – Valard June 2021 Memo

Valard | Connecting People. Powering Communities.

4209 99th Street | Edmonton, AB | T6E 5V7
p. 780.436.9876| f. 780.436.9822 | valard.com

Wataynikaneyap Power Project
2021 Kasabonika Temporary Camp

June 22, 2021

1.0 INTRODUCTION

A partnership that has grown to 24 First Nation communities was formed (First Nation Limited Partnership [FNLP]) to address the need for sufficient electricity supply for 17 remote First Nation communities. FNLP partnered with Fortis Inc. (Fortis), to establish a licenced transmission company, the Wataynikaneyap Power Limited Partnership (Wataynikaneyap) with a mandate to develop, construct, operate, and own the Wataynikaneyap Transmission Project. The Wataynikaneyap Transmission Project is being developed in two phases. Phase 1, the New Transmission Line to Pickle Lake Project, is an approximately 300-kilometre (km) long, 230-kilovolt (kV) transmission line from the Dinorwic (east of Dryden) / Ignace area to Pickle Lake in northwestern Ontario. Phase 2 Connecting 17 Remote First Nation Communities (the Project) includes approximately 1,630 km of 115-kV, 44-kV, and 25-kV alternating current (AC) transmission lines, and associated infrastructure for subsystems north of Pickle Lake and Red Lake that will connect 17 remote First Nation communities currently powered by diesel generation, to the provincial electrical grid. The Engineering, Procurement, and Construction (EPC) Contractor for the Project is Valard Construction LP (Valard).

2.0 KASABONIKA TEMPORARY LAYDOWN, CAMP AND ROAD

A temporary laydown, camp and road is proposed adjacent to Kasabonika Lake First Nation. The camp/ laydown is approximately 1.6 km away from the 440m limits of work. While this is outside of the Environmental Study Report, Kasabonika Lake First Nations Chief and Council chose and supports this location. This location supports safe distancing between Valard crews and that Kasabonika Lake First Nations community during the COVID-19 pandemic. This location was also selected as it is an upland area with relatively level topography.

The size of the laydown, at approximately 5.37 ha, is required due to the seasonality of the road and remoteness of the location. A significant amount of materials and equipment will be stored on the location in order to facilitate construction. The size of the camp/laydown was determined based on the amount of materials needed to be stored at this location.

The combination of good ground, access to the garbage dump, the airport and distance from Kasabonika Lake First Nation makes this location an ideal spot. Additionally, the Kasabonika First Nation's leadership picked the location, as it facilitates construction of the project and supports safe distancing between community members and construction crews.

Valard will procure all permits and will run the camp in partnership with the community of Kasabonika Lake First Nation.

4209 99th Street | Edmonton, AB | T6E 5V7
p. 780.436.9876| f. 780.436.9822 | valard.com

The temporary camp will house an anticipated occupancy of approximately 50 people (<10,000L/day of wastewater). An application for a septic field system will be submitted to NWHU, for installation in fall of 2021. Potable water will be obtained from Kasabonika Lake or from the community and municipal waste will either be transported to the local garbage dump or incinerated on site.

Following construction activities for the project, the camp will be reclaimed as per the standards agreed upon between Wataynikaneyap, Valard and MNRF. Please refer to the attached camp layout for additional details.

April __, 2021

By email to:
aborowiecki@valard.com

VALARD CONSTUCTION
4209 99th Street
Edmonton, AB
T6E 5V7

Attention: Adam Borowiecki

RE: WATAYNIKANEYAP POWER TRANSMISSION PROJECT
LETTER OF SUPPORT
Kasabonika Temporary Camp and Laydown

Wataynikaneyap Power LP ('Wataynikaneyap') has retained Valard Construction LP ('Valard') for construction of the Wataynikaneyap Power Transmission Project ('The Project'). The Project will build approximately 1,800 kilometres of transmission lines in northwestern Ontario to connect seventeen (17) remote First Nations communities to the Ontario power grid.

Kasabonika Lake First Nation and Valard were in engagement for a camp and laydown location, with an associated access road. Kasabonika Lake First Nation has provided support for the locations near Kasabonika lake, as outlined on the attached map. Please accept this letter as support for Valard to temporarily use the camp and laydown area to facilitate the construction of the Project.

Sincerely,

Chief Tom Semple
tomjs@kasabonika.ca
PO Box 124
Kasabonika Lake, ON
P0V 1Y0

Kasabonika Lake First Nation – Shibogama First Nation look forward to continuing to work with Valard on this project.

Kasabonika Camp
5.37 ha
15N 787959 m E 5940289 m N

Kasabonika Access Road
1260 m
1.79 ha

Kasabonika Winter Rd

Kasabonika Lake

First Nation:
Kasabonika Lake

Kasabonika Airport

L25
L24
L23
L22
L21
L20
L19
L18
L17
L16
L15
L14
L13
L12

Valard
Connecting People. Powering Communities.

Coordinate system: NAD 1983 UTM Zone 15N

Created by Bryan Bai Date:5/10/2021
This map was developed using available information and may not accurately represent the location, definition or distribution of land based features.

Wataynikaneyap Construction Camp Map

Name: Kasabonika Camp Segment: L Project: Group 2 Closest structure: L1

1:10,000
0 100 200 400 600 800
Meters

N
W E
S

- Stakings
- Kasabonika Access Road
- Kasabonika Camp
- Access Plan Rev1.2
- ROW
- Limits of Work
- Contours (2m)
- Watercourse
- Waterbody
- Provincial Parks
- First Nations