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6.25 Federal Considerations

This section provides an assessment of:

- Changes to the environment directly linked or necessarily incidental to Federal decisions (Section 6.25.2).
- The effects of changes to the environment on federal or transboundary lands (Section 6.25.3); and,
- The effects of changes to the environment within federal jurisdiction (Section 6.25.4);

6.25.1 Influence of Consultation

Consultation has been ongoing for several years, prior to and throughout the environmental assessment process, and will continue with Indigenous communities, government agencies and the public through the life of the Project. Section 2 provides more detail on the consultation process. The Record of Consultation (Appendix D) includes detailed comments received, and responses provided, during the development of the final Environmental Impact Statement / Environmental Assessment (EIS/EA).

Feedback received through consultation has been addressed through direct responses (in writing and follow-up meetings) and incorporated into the final EIS/EA, as appropriate. The key comments that influenced the assessment for federal considerations between the draft and final EIS/EA are provided below.

The Impact Assessment Agency of Canada (IAAC) requested information on non-Indigenous land and resource use and socio-economic conditions to determine potential effects due to changes to the environment that are directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out of the Project (refer to subsection 5(2)(c) of CEAA 2012). Further, IAAC requested that biophysical effects assessment be sufficiently scoped to enable the assessment of pathways of effects from the Project to non-Indigenous receptors. Section 6.25.4 includes an assessment of the potential effects due to changes to the environment that are directly linked or necessarily incidental to a federal power, duty or function. This assessment has been broadly scoped, and utilizes the assessment results from applicable VCs (Section 6.2 to Section 6.24). These assessments have incorporated a pathways to potential effects approach under the identification of potential effects, and is used to focus the assessment. The results of these assessments are used to inform the assessment of the potential effects due to changes to the environment that are directly linked or necessarily incidental to a federal power, duty or function.

IAAC requested a characterization of the residual effect and determination of significance for each VC within federal jurisdiction. VCs within federal jurisdiction include fish and fish habitat (Section 6.10), migratory birds (Section 6.12), species at risk (Section 6.13 Caribou; Section 6.14 Wolverine; Section 6.15 bats; and, Section 6.16 species at risk [SAR] birds), and Indigenous peoples (Section 6.26). Each of these sections includes a characterization of residual effects, and a determination of significance. For clarity and to meet the requirements of the EIS guidelines, the characterization and significance determination for these VCs has also been presented in Section 6.25.4.

IAAC requested that a description of the federal decisions that would enable the Project to proceed, a description of the activities, changes to the environment, and effects of those changes, a description of the geographic scope of the activities requiring a federal decision, and a characterization of effects on SAR, resource-based socio-economic activities and navigation associated with these activities. Section 6.25.2 includes a description of these items.

6.25.2 Changes to the Environment Directly Linked or Necessarily Incidental to Federal Decisions

This section describes effects linked to a federal authority's exercise of a power or performance of a duty or function, in relation to subsection 5(2) of the Act. Subsection 5(2) of the Act specifies that effects to be considered pursuant to subsection (5(2) are in addition to those considered pursuant to subsection 5(1). Section 6 of the EIS/EA considers effects linked to Project development and operation for a comprehensive list of VCs, including several VCs that are beyond the scope of subsection 5(1) requirements, where subsection 5(1) requirements are defined specifically as those related to the following Acts:

- *Fisheries Act;*
- *Species at Risk Act;*
- *Migratory Birds Convention Act*; and
- Those related to Indigenous peoples as defined in subsection 5(1)(c) of the Act.

The exercise of a power or performance of a duty by a federal authority, in relation to the Project, as this could apply to subsection 5(2) of the Act, is limited that potentially associated with application of the:

- *Fisheries Act;*
- *Species at Risk Act;*
- *Migratory Birds Convention Act;*
- *Canadian Navigable Waters Act;* and
- *Explosives Act.*

6.25.2.1 *Fisheries Act*

With respect to the exercise of powers under the *Fisheries Act,* Section 6 of the EIS/EA considers effects to the following VCs:

- Fish and fish habitat; and
- Surface water systems.

Fish and Fish Habitat

Fish and fish habitat could potentially be affected by Project development through loss or alteration of fish habitat, changes in fish communities and changes in fish health due to changes in surface water quality. The potential adverse effects to fish and fish habitat relating to *Fisheries Act* functions are expected to be limited to within the PDA. Potential effects to fish and fish habitat, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.10 and summarized in Table 6.10-10.

Two dikes (west dike and east dike) will be constructed in the north basin of Springpole Lake and result in the disruption of 156 ha of fish habitat, which makes up approximately 6% of the surface area of Springpole Lake.

Once mining concludes in approximately Year 10, the open pit basin will start to fill with water by direct precipitation, and groundwater infiltration from the surrounding bedrock. To reduce the filling time, supplemental water from Springpole Lake is planned to be transferred to the open pit basin in a controlled manner while maintaining lake water levels within the same scale and magnitude as existing conditions. At

the proposed active filling rate, the combined dewatered open pit basin / fish habitat development area basin would require 3 to 5 years to fill to the average elevation of Springpole Lake.

The offsetting measures as described in the revised Fish Habitat Offset and Compensation Plan (Appendix F) will be implemented during the construction and operation phase of the Project. The remaining fish offsetting measures will be implemented during the last two years of operation and active closure phase. It is anticipated that 493 ha of fish habitat will be created through these offsetting measures, and as a result, there will be no residual effects to fish habitat.

With the implementation of mitigation measures, there are no residual effects to fish communities or fish health predicted.

In providing authorizations (or performing other functions) pursuant to or linked to the *Fisheries Act*, other components of the environment dependent upon, or linked to, the aquatic environment could also potentially be affected by any such decision. These other components that might use the relevant aquatic habitats include:

- Wetland communities;
- Herptiles;
- Aquatic Furbearers;
- Moose; and
- Migratory and non-migratory birds.

Potential effects on these components could also potentially result in an associated additional indirect effect on human health or socio-economic conditions, depending on the mode of use, if any.

Wetland Communities

Wetlands could potentially be affected by Project development, though direct and indirect loss or alteration. The potential adverse effects to wetlands relating to *Fisheries Act* functions are expected to be limited to within the Project Development Area (PDA). Potential effects to wetlands, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.11 and summarized in Table 6.11-5.

There are 193 ha of wetlands in the PDA which is approximately 9.6% of the PDA. There are no publicly available records of provincially significant wetlands that occur in the RSA. Fieldwork from 2021 found that wetlands were abundant in the investigation area.

It is predicted that approximately 193 ha of wetlands will be removed / altered which represents 0.8% of wetlands within the Local Study Area (LSA) and 0.2% within the Regional Study Area (RSA). There will be an anticipated direct removal of 127 ha of swamp community, corresponding to approximately 0.8% of this community within the RSA. The PDA has an anticipated direct displacement of 18 ha of bog communities which represents 1.5% of these communities within the RSA. The PDA has an anticipated direct displacement of 8 ha of fen communities, which represents 2.6% of these communities within the RSA. The PDA has an anticipated direct displacement of 40 ha of wetland areas, representing 0.7% of these communities within the RSA. During the closure phase, rehabilitation will support the growth of native vegetation communities; however, it is unlikely that wetland communities will be fully reclaimed. Once pit dewatering ceases, any operational impacts to groundwater levels contributing to local wetlands will return to pre-development conditions after closure. There may be opportunities to recreate wetland habitat during closure in the

potential aggregate locations. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

Herptiles

Herptiles could potentially be affected by Project development, though the direct or indirect loss and/or disturbance of habitat. The potential adverse effects to herptiles relating to *Fisheries Act* functions are expected to be limited to the direct removal, and/or isolation of waterbodies and watercourses within the PDA. Potential effects to herptiles, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.12 and summarized in Table 6.12-6. Herptiles in the RSA include four frog species and one snake species observed during field investigations. Spring Peeper, American Toad, and Wood Frog were abundant throughout the investigation area in a wide variety of habitats, while Northern Leopard Frog was present locally in low numbers. Common Gartersnake was observed frequently throughout the investigation area. No other snake species are expected to occur in the investigation area. No turtles were observed during field investigations. The predicted loss of 32 ha of potential habitat for herptiles makes up 0.54% of the available habitat in the RSA. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

Aquatic Furbearers

Aquatic furbearers could potentially be affected by Project development, though direct or indirect loss and/or disturbance of habitat. The potential adverse effects to aquatic furbearer species relating to *Fisheries Act* functions are expected to be limited to the direct removal, and/or isolation of waterbodies and watercourses within the PDA. Potential effects to aquatic furbearers, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.12 and summarized in Table 6.12-6.

Aquatic furbearers in the LSA include Beaver, Weasel, Mink, and Otter that were observed during field investigations. All of these furbearers were documented by visual confirmation or other signs, such as tracks, in the investigation area, or from historical trapping records. There is predicted to be a loss of 1,493 ha of potential habitat for aquatic furbearers which makes up 1.09% of the available habitat in the RSA. The loss of 320 ha of potential habitat for beaver makes up 0.63% of the available habitat in the RSA. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

Moose

Moose could potentially be affected by Project development, though the direct and indirect loss or alteration of habitat. The potential adverse effects to Moose relating to *Fisheries Act* functions are expected to be limited to the direct removal of feeding areas within the PDA. Potential effects to Moose, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.12 and summarized in Table 6.12-6.

Moose were detected during winter aerial surveys. During the survey, 32 Moose (16 cows, 4 calves, 3 bulls, and 8 unclassified) were observed. The unclassified observations were due to thick conifer cover and the inability to sex animals. Moose wintering areas were associated with early successional habitats in proximity to heavier cover created by forestry and burns.

There is a predicted loss of 1,493 ha of potential late winter habitat cover which makes up 0.29% of the available habitat in the RSA. There is also a loss of 32 ha of potential foraging habitat for moose which makes up 0.07% of the available habitat in the RSA. Overall, there may be a loss of 1,525 ha of potential moose habitat, which makes up 0.27% of the available habitat in the RSA. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

Migratory and Non-Migratory Birds

Migratory and non-migratory birds that use wetland and riparian habitats could potentially be affected by Project development, though the direct and indirect loss or alteration of habitat. The potential adverse effects to these birds relating to *Fisheries Act* functions are expected to be limited to the direct removal of feeding areas within the PDA. Potential effects to migratory and non-migratory birds, mitigation measures to minimize the effects and an assessment of any residual effects are described in Section 6.12 and summarized in Table 6.12-6.

There is predicted to be a loss of 32 ha of potential late winter habitat cover for waterfowl which makes up 0.54% of the available habitat in the RSA. There is also predicted to be a loss of 320 ha of potential habitat for waterbirds such as Common Loon and Bonaparte's Gull, which makes up 0.64% of the available habitat in the RSA. Further, there is a predicted loss of 1,648 ha of potential habitat for raptors such as Osprey and Northern Goshawk, which makes up 0.95% of the available habitat in the RSA. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

6.25.2.2 *Species at Risk Act*

There is no expectation of an effect relating to subsection 5(2) of CEAA 2012 involving the exercise of a power or performance of a duty by a federal authority in relation to the *Species of Risk Act*. However, Canada and Ontario have reached an agreement on April 22, 2022 to support the conservation and recovery of Caribou (Boreal population) in Ontario, and will collaborate on actions to benefit the recovery of the species.

Section 6 of the EIS/EA considers effects to the following VCs: Caribou, Wolverine, bats and birds. The only SAR species that have been identified as occurring at the site and having the potential to be adversely affected by Project development are Caribou, Wolverine, Little Brown Myotis, Northern Myotis and Eastern Whip-poor will. Potential effects to SAR, mitigation measures to minimize the effects and an assessment of residual effects are described in Section 6.13 (Caribou), Section 6.14 (Wolverine), Section 6.15 (bats) and Section 6.16 (SAR birds). A summary of potential effects, mitigation measures and residual effects associated with the *Species at Risk Act* is provided in Sections 6.13 through 6.16 and Tables 6.13-4, 6.14-4, 6.15-5 and 6.16-4.

6.25.2.3 *Migratory Birds Convention Act*

With respect to the exercise of powers under the *Migratory Birds Convention Act*, potential effects to migratory birds, mitigation measures to minimize effects and an assessment of any residual effects are described in Section 6.12 and summarized in Table 6.12-6.

The terrestrial baseline studies detected 97 migratory bird species during the breeding bird point counts and an additional 11 species incidentally. The mean species richness / point count station was 10.6 species (range 2 to 20). The mean abundance / point count station was 15.2 birds (range 3 to 35, excluding Canada goose flock overflights). The most abundant and frequently observed species in the investigation area are representative of the avifauna and habitats found in the study area (boreal coniferous forest and wetland)

and include: Ruby-crowned Kinglet, Nashville Warbler, White-throated Sparrow, Dark-eyed Junco and Yellow-rumped Warbler. The mean species richness and abundance at proposed impact sites was 15.1 birds and 10.2 species/point count station, compared to reference sites which were 15.4 birds and 11.3 species/point count station.

The loss of migratory bird habitat in the PDA will be greatest during the construction phase, with rehabilitation occurring during the operations and closure phases. The relative change in available migratory bird habitat from direct habitat loss is 1,493 ha of potential songbird habitat cover which makes up 1.09% of the available habitat in the RSA for wildlife. There will be a loss of 32 ha of potential late winter habitat cover for waterfowl which makes up 0.54% of the available habitat in the RSA for wildlife. Further, there will a loss of 320 ha of potential habitat for waterbirds which makes up 0.64% of the available habitat in the RSA for wildlife. Indirect effects to migratory bird habitat will occur during all phases, but the greatest effects will occur during the operations phase, due to sensory disturbance. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

There are no other additional effects to migratory birds that could reasonably be expected to result from a consideration of subsection 5(2) of the Act from the exercise of a power or performance of a duty by a federal authority in relation to the *Migratory Birds Convention Act*.

6.25.2.4 *Canadian Navigable Waters Act*

The Project activities including overprinting watercourses and altering flows in waterbodies and watercourses which may interfere with navigation in non-scheduled waters under the *Canadian Navigable Waters Act* and may be subject to the common law right of navigation. Potential effects, mitigation measures to minimize effects and an assessment of any residual effects are described in Section 6.18 for navigation and summarized in Table 6.18-8.

None of the waterbodies in the mine site area PDA are listed as navigable waters within Schedule 1 of the *Canadian Navigable Waters Act*. Based on historical research, it was determined that navigation routes for watercraft exist including Springpole Lake, Birch Lake and unnamed lakes L-1 and L-2, as well as larger watercourses such as the Birch River (Table 6.25-1). Six portage routes between lakes are located in the LSA for outdoor recreation, with two located in the PDA that traverse the Springpole exploration camp.

The construction and operation of the Project will remove existing portage routes that cross the PDA and will affect navigational routes between the northern part of Springpole Lake and Birch Lake due to the construction of the cofferdams and construction and operation of the mine site. The effect on the portage route will be offset by providing an alternate route to users during construction and operation of the Project, and therefore the effects on the navigation will be mitigated. During closure, the open pit basin will be refilled with water within 3 to 5 years and a connection with the north basin of Springpole Lake will be re-established once suitable water quality conditions exist in the open pit basin. This would allow the previous navigation route and portage routes to be used in the same or similar area prior to the construction of the Project. As a result, there will be no residual effect on navigation.

There are no other additional effects to navigation that could reasonably be expected to result from a consideration of subsection 5(2) of the Act from the exercise of a power or performance of a duty by a federal authority in relation to the *Canadian Navigable Waters Act*.

6.25.2.5 *Explosives Act*

The development of explosives facilities has the potential to displace terrestrial habitats (and their associated wildlife) associated with facility construction. The detonation of explosives for mineral extraction also has the potential to disturb wildlife that are sensitive to noise disturbance. Potential effects, mitigation measures to minimize effects and an assessment of any residual effects are described in Section 6.11 for vegetation communities and wetlands and Section 6.12 for wildlife and wildlife habitat. A summary of the potential effects, mitigation measures and residual effects is provided in Table 6.11-6 and Table 6.12-6.

Upland vegetation communities in the PDA make up 1,357 ha and comprise approximately 67.5% of the PDA, 5.7% of the LSA and 1.2% of the RSA. Plant species diversity in these habitats is rather low. Typical species growing where the soil has accumulated include Jack Pine, Paper Birch, Black Spruce and blueberries. Lichens and mosses are abundant.

During construction, existing vegetation communities in the PDA will be removed and the vegetation communities are not likely to return to the existing conditions. Rehabilitation measures are to be implemented progressive during the operations and during the final closure phase which will be detailed in the provincially-required Closure Plan. During the closure phase, areas within the PDA will be revegetated through active seeding of commercially available native plant species and natural revegetation.

Indirect effects to wildlife habitat will occur during all phases, but the greatest effects will occur during the operations phase, due to sensory disturbance. The residual effect will be minimized with the implementation of mitigation measures and would be reversible during the closure phase with the implementation of rehabilitation measures in the PDA, and the reduction in Project activity.

There are no other additional effects to vegetation communities or wildlife that could reasonably be expected to result from a consideration of subsection 5(2) of the Act from the exercise of a power or performance of a duty by a federal authority in relation to the *Explosives Act*.

6.25.3 Effects of Changes to the Environment on Federal or Transboundary Lands

The federal EIS Guidelines (Appendix B-1) require that the EIS consider the effects of changes to the environment on federal or transboundary lands.

Cat Lake First Nation Reserve Lands are located 49 km to northeast of the centroid of the mine site area of the Project. Approximately 13 km of the transmission line and associated corridor will be constructed on Slate Falls Nation Reserve lands. The Project is located approximately 290 km north of the border between Canada and the United States. As the Project is located more than 100 km from this border, notification is not required under the *1991 Canada-United States Air Quality Agreement* (CEAA 2004).

6.25.3.1 Description of Activity

The Project site is remotely located without permanent power infrastructure. During the initial construction phase, diesel-fired generators are expected to be the primary power supply until a transmission line connecting to the regional electrical grid can be constructed. Preliminary discussions with the Independent Electricity System Operator have confirmed that there is sufficient capacity within the Ontario electrical grid in the region to supply the power demand.

A 93.4 km, 230-kilovolt (kV) overhead transmission line is proposed to tie the Project into the Wataynikaneyap 230 kV line between Dinorwic and Pickle Lake (Figure 5.18-1). The Wataynikaneyap transmission line, has recently been developed and energized by Wataynikaneyap Power LP, a licensed transmission company equally owned by 24 First Nations communities (51%), in partnership with Fortis Inc.

and other private investors (49%). The proposed transmission line route has been established to minimize overall length, reduce environmental effects and respect traditional land use by adjacent Indigenous communities. Since the draft EIS/EA was submitted for comment, engagement with SFN resulted in optimizing the transmission line route to pass north of the community of Slate Falls adjacent to the existing E1C line thereby reducing the length of new linear corridors created and avoiding important land use areas. This engagement aligned with comments received from the Ministry of the Environment, Conservation and Parks Species at Risk Branch that emphasized the importance of minimizing new linear corridors. Traditional Land Use information shared by Mishkeegogamang Ojibway Nation also noted several land use values located along the southern end of Alternative 3 transmission line route which further informed the optimization of the transmission alignment. The transmission line is expected to be composed primarily of single, steel pole structures, established within a 40 m wide corridor, much of which follows the existing E1C transmission line. Additional cleared corridor width may be required at turning points, or where pole anchors are needed (such as in poor ground conditions), as well as for temporary laydown area(s) and access roads. The switching station at the connection point with the Wataynikaneyap transmission line will have a footprint of about one acre. The transmission line is expected to be constructed primarily in the winter from temporary winter roads, avoiding sensitive periods for wildlife as much as possible. Establishment of a permanent road along the transmission line route is not proposed, unless winter roads prove to be untenable. Work including vegetation clearing may also occur during the late summer and fall on higher ground / in areas of good accessibility.

The incoming electrical power from the 230 kV transmission line will be stepped down in an onsite substation for site distribution. The lines will be located within the plant site in cable trays or via underground duct banks as needed, but overhead powerlines will be used to distribute power to more distant facilities such as the mine and accommodations complex areas.

6.25.3.2 Assessment Methods

The approach to the assessment includes a description of the spatial and temporal boundaries, a description of the existing conditions, the identification and description of applicable pathways of potential effects, a description of applicable mitigation measures, a characterization of residual effects after the application of applicable mitigation measures, and a determination of significance of any residual effects.

The following VCs were selected for assessment in relation to the effects of the Project:

- Atmospheric environment, which includes consideration for air quality, noise and vibration, and greenhouse gas emissions;
- Aquatic environment, which includes consideration for groundwater, surface water quality and quantity, and fish and fish habitat;
- Vegetation communities and wetlands;
- Wildlife and wildlife habitat, which includes consideration for species at risk (Boreal Caribou, Wolverine, bats and birds);
- Human environment, which includes consideration for commercial land and resource use, outdoor recreation, local and regional infrastructure, services and economy, and human and ecological health;
- Traditional land and resource use (TLRU); and,

- Cultural environment, which includes consideration archaeology, built heritage resources and cultural heritage landscapes.

The development process and rationale for valued components for the Project is detailed in Section 6.1.2.1.

6.25.3.3 Spatial and Temporal Boundaries

The footprint of this activity includes the transmission line corridor within the boundary of the federal lands, as well as a buffer to allow flexibility for design optimizations during Project permitting, which will be within the 60 m wide corridor.

The spatial boundaries used for the assessment are defined as follows:

- **Local Study Area (LSA):** The LSA corresponds to the area in the vicinity of the Project where most of the effects of the activity are expected to occur and can be predicted or measured with a reasonable degree of accuracy; this is a 2 km buffer from the centreline of the transmission line.
- **Regional Study Area (RSA):** The RSA for is defined as an area that extends approximately 10 km from the centreline of the transmission line, where effects would not be measurable.

The temporal boundaries for the assessment of air quality are defined as:

- **Construction phase:** Years -2 to -1, representing the construction period for the activity.
- **Operation phase:** Years 1 to 10, with the first year potentially representing a partial year as the Springpole Gold Project transitions from construction into operation. Mining of the ore from the open pit will end in Year 10, at which time closure activities at the mine site will commence.
- **Decommissioning and closure phase:** Years 11 to 15, during which final decommissioning and the majority of active reclamation activities at the mine site area are carried out. The transmission line will be decommissioned during this period, if no longer required.

The effects on the VCs are assessed for each Project phase (i.e., construction, operation and closure).

6.25.3.4 Atmospheric Environment

Baseline Conditions

Data from regional monitoring stations indicate good air quality attributed to the rural setting near the Project. The long-term average measurements of nitrogen dioxide and sulphur dioxide indicate concentrations onsite are substantially lower than the Ambient Air Quality Criteria and regional estimates. The sound monitoring data indicate that the environment in the study area is characteristic of a rural (Class 3) area, in accordance with Ministry of the Environment and Climate Change guideline publication NPC-300 (MOECC 2013). Average sound levels at both monitoring locations are 25 dBA (nighttime) and 35 dBA (daytime) on a one-hour L_{Aeq} basis.

Pathways to Potential Effects

Interactions between the transmission line and the atmospheric environment can result in pathways to potential effects, prior to the application of mitigation measures. During the construction of the transmission line, there may be pathways to potential effects on the atmospheric environment due to the operation of construction equipment. This includes localized and short-term changes in the concentrations of air quality parameters (including greenhouse gases) and sound levels due to the operation of equipment. The operation of the transmission line will require maintenance on an occasional basis and may result in a pathway to a short-term and localized potential effect on air quality and sound due to the emissions

generated from the operation of equipment. At closure, the transmission line will require decommissioning, and there may be pathways to potential effects on air quality and sound due to the operation of equipment. These will be localized and of short duration.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on the atmospheric environment and will be applied to the specific pathways illustrated in Table 6.25-2:

- During construction and operation, equipment and vehicles will be operated with pollution control equipment, and a preventive routine maintenance program will be employed to reduce air emissions.
- During construction, site equipment will be operated to meet applicable operational noise limits at points of reception, when applicable.
- Prior to beginning construction in a given area, FMG will work with local Indigenous communities to confirm the presence of a points of reception that will be in use within 500 metre of the transmission line right-of-way during construction activities. If confirmed, FMG will work with those land users to provide notice and minimize noise, as needed, at a given points of reception when it is in use.
- For helicopter use during transmission line construction, minimum flight altitudes will be maintained unless the helicopters are engaged in construction tasks, landing or departure.

Potential Residual Effects

With the implementation of mitigation measures for the atmospheric environment, the potential changes in air quality parameters and sound levels will be minor, localized to the immediate work area and occur over a short duration. The residual effect will be continuous during the construction period but will be fully reversible upon completion.

Significance Determination

With the implementation of mitigation measures for the atmospheric environment, the cumulative concentrations for all parameters are below the applicable criteria and/or standards at the extent of the leased property boundary. The residual effects would be confined to a limited geographic area over a short duration. The residual effects are fully reversible as the effects will cease once the construction of the transmission line is complete.

As discussed in Section 6.3.6.1, the construction of the transmission line is expected to result in short-term exceedances of applicable federal sound level limits within 500 m of the activity. However, construction will proceed in a linear fashion along the transmission line route with only a limited amount of time being spent at any particular location. Any exceedance will be temporary in nature, expected to occur only when construction activities are in close proximity to a point of reception and limited to the vicinity of the transmission line right-of-way. As a result, the adverse residual effect on the atmospheric environment is predicted to be not significant.

6.25.3.5 Aquatic Environment

Baseline Conditions

Numerous local inland waterbodies (lakes / ponds) and watercourses within the baseline investigation area were surveyed between 2012 and 2023. Results of the baseline hydrology program are for key stations and watercourses that were identified as potentially affected by the Project; however, these are also representative of the waterbodies and watercourses within the baseline investigation area.

Water quality results indicate that the surface waters in all monitored waterbodies are typical of oligotrophic lakes in northwestern Ontario, demonstrating limited nutrient availability, low turbidity and saturated to near-saturated dissolved oxygen concentrations. Levels of total suspended solids and total dissolved solids were generally very low. Water column profile results indicate that most lakes experience a turnover during the year and but remain stratified throughout the summer months. Concentrations of total and dissolved metals are very low, often at or below analytical detection limits.

Lakes within the region surrounding the Project are characterized by intermediate mean depths, medium mean surface area and intermediate morphoedaphic index (potential fish yield) scores. These tea-stained lakes represent one of two general fish community types found in the region: coolwater and coldwater. Coolwater communities are most often found in more productive, shallow waters and are characterized by fish species with optimum growth occurring between 15°C and 25°C (Scott and Crossman 1998). Common sport fish in coolwater communities include Walleye and Northern Pike.

Pathways to Potential Effects

Interactions between the transmission line and the aquatic environment can result in pathways to potential effects, prior to the application of mitigation measures.

The construction of the transmission line results in pathways to potential effects on fish and fish habitat due to the use of equipment in fish habitat that could affect active spawning areas and disturb the bed and banks of watercourses and/or waterbodies that support fish habitat. The disturbance and erosion of the banks could affect surface water flows thereby affecting fish passage or lead to downstream erosion and sedimentation that could change water quality and affect fish health. However, the construction of the transmission line is anticipated to occur during frozen conditions, above the water table, or within a small area for a very short period of time. This will be effectively managed with standard best practices, such as limiting the active construction area to the extent possible and having spill contingency plans.

There are no anticipated pathways to potential effects on the aquatic environment resulting from the operation and maintenance of the transmission line.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on the aquatic environment and will be applied to the specific pathways illustrated in Table 6.25-2:

- The construction of the transmission line will occur during frozen conditions;
- The transmission line poles will be located above the high-water mark to avoid in-water structures and a direct loss of fish habitat;

- Riparian vegetation will be maintained along the banks of watercourses crossed by the transmission line, and is expected to remain adequate to prevent long term ground erosion and sedimentation; and,
- An erosion and sediment control plan will be implemented to mitigate the entry of sediment into surrounding waterbodies, where required; and,

Potential Residual Effects

With the implementation of mitigation measures for the aquatic environment, the potential residual effects will be effectively managed with standard best practices. As a result, there are no residual effects predicted to the aquatic environment due to the transmission line and a determination of significance is not required.

6.25.3.6 Vegetation Communities and Wetlands

Baseline Conditions

The Project is located in the Northern Coniferous Region of Ontario's boreal forest, an area defined by complex glacial landforms, rocky ridges, and shallow soils. Dominant forest types include Black Spruce, Jack Pine, and Tamarack, which thrive in both upland and poorly drained lowland areas. The climate is microthermal and humid, with distinct temperature and precipitation gradients influencing soil and vegetation diversity. Fieldwork identified 368 plant species, including five rare species and one species at risk (SAR), Black Ash, in the baseline investigation area.

Terrestrial ecosites comprised approximately 67% of the of the baseline investigation area and the dominant vegetation community is coniferous forest. Most areas are heavily dominated by Black Spruce and Jack Pine, with the spruce being more common in moister and more mature forests, while Jack Pine is more common in drier, rockier settings and in areas regenerating from fires and logging. Small amounts of White Spruce, White Birch and Trembling Aspen may be mixed into coniferous forests. Balsam Fir may be common in the sub-canopy and understory of coniferous forests but is rarely present in the canopy. Low shrubs, including Labrador Tea and blueberries, are often abundant, but taller shrubs such as Green Alder are less common. Small Black Spruce and Balsam Fir are often abundant in coniferous forests. Ground layers of coniferous forest may have little plant growth besides moss or contain a diverse array of other plants. Typical species include Bunchberry, clubmosses, Creeping Snowberry, Mountain Cranberry, Wild Sarsaparilla and Twinflower. Sparse treed, deciduous / mixed tree and bedrock ecosites are also present.

Wetland ecosites comprised approximately 34% of the baseline investigation area. The wetland communities surveyed include swamps, marshes, and bogs and fens. Wetlands exist in different site types including palustrine (inland with no flow or intermittent inflow and either permanent or intermittent outflow), lacustrine (associated with a lake), and isolated (e.g., fens and bogs). During the 2012 wetland evaluations (DST 2013b, 75.1% of the wetlands were lacustrine sites, 23.4% were palustrine, and 2.2% were isolated. Based on the 2023 FRI data, 47.3% of the wetlands were lacustrine sites, 36.1% were palustrine, and 16.7% were isolated. Lacustrine sites are often associated with marshes. Marshes, in the boreal forest, are often found as a transition between open water and shorelines and contain dominant species such as robust emergent and submerged plant species.

Pathways to Potential Effects

Interactions between the transmission line and vegetation communities and wetlands that can result in pathways to potential effects, prior to the application of mitigation measures. The construction of the transmission line results in a pathway to a potential effect due to the alteration of vegetation communities

within the transmission line corridor that may indirectly affect vegetation communities. The operation and maintenance of the transmission line results in a pathway to a potential effect on vegetation communities due to vegetation management, which could continue to directly affect vegetation communities.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on the vegetation communities and wetlands and will be applied to the specific pathways illustrated in Table 6.25-2:

- During construction and operation, minimize the clearing of vegetation within the transmission line corridor as feasible;
- During construction and operation, minimize the removal of woody vegetation within the transmission line corridor to maintain natural cover to adjacent areas. The removal of woody vegetation will be limited to hazard trees and clearing to provide safe construction access and infrastructure needs;
- Mechanical vegetation removal practices will be used, when possible;
- An invasive species management plan will be implemented during construction and operation to reduce the spread of invasive and non-native species from the Project.
- The construction of the transmission line will occur during frozen conditions to minimize compact and disturbance of wetland areas.

Potential Residual Effects

Change in the Relative Abundance and Diversity of Plant Species and Vegetation Communities

There will be a change in relative abundance and diversity of plant species and vegetation communities, including species of interest to Indigenous communities, species at risk and species of conservation concern may occur during the construction and operation of the transmission line due to vegetation loss or alteration, fragmentation, competition from invasive and non-native species, and vegetation management. The transmission line has an area of 80.4 ha. It has been conservatively assumed that all terrestrial and wetland vegetation communities within the footprint will be removed during construction, including 53 ha of terrestrial communities and 28 ha of wetland communities.

Change in the Function, Connectivity, and Quality

There will be minor and localized changes in the function, connectivity and quality of vegetation communities and wetlands due to edge effects. Vegetation communities within 30 m of the footprint will be most susceptible to edge effects. This includes approximately 26 ha of terrestrial vegetation communities and 14 ha of wetland communities, for a total of 40.2 ha.

Change in the Relative Abundance and Area of Wetland Extent

There could be minor and localized changes to the relative abundance and area of wetland extent from the construction and operation phases of the transmission line due to the removal of wetland vegetation. There is 27.6 ha of wetlands within the footprint, which represents less than 0.1% of the wetlands in the RSA. This consists of coniferous swamp (19.2 ha), thicket swamp (1.1 ha), marsh (0.7 ha), and bog and fen (6.6 ha). With the implementation of mitigation measures, including placing transmission line infrastructure above

the high-water mark, and minimizing the removal of vegetation to that needed for safe operation, it is anticipated there will be no residual effects to wetland areas.

Significance Determination

The residual effect on vegetation communities and wetlands is the decrease in relative abundance and diversity of vegetation communities, the change in the function, connectivity and quality of vegetation communities and the change in relative abundance and area of wetland extent.

Change in the Relative Abundance and Diversity of Plant Species and Vegetation Communities

With the implementation of mitigation measures, the magnitude of the residual effect due to a decrease in relative abundance and diversity of vegetation communities, including Indigenous species of interest, is low as the predicted change is 0.1% of the RSA. Vegetation communities are common throughout the RSA, and the removal in the footprint is unlikely to threaten the long-term viability of vegetation communities. The geographic extent of the residual effect is constrained to the footprint but will last until the transmission line is removed at closure, at which is it expected to be partially reversible. The frequency of the residual effect is once during construction. As a result, the adverse residual effect on vegetation communities and wetlands due to a decrease in relative abundance and diversity of vegetation communities, including special interest species is predicted to be not significant.

Change in the Function, Connectivity, and Quality

With the implementation of mitigation measures, the magnitude of the residual effect of the decrease in the quality, connectivity and function of vegetation communities and wetlands is low. There will be a 0.1% decrease in vegetation and wetlands communities at the RSA scale. The geographic extent of the residual effect will extent into the LSA, and is expected to occur continuously until the transmission line is decommissioned. However, the residual effect is expected to be reversible at closure. As a result, the adverse residual effect on vegetation communities and wetlands due to a decrease in decrease in the quality, connectivity and function is predicted to be not significant.

6.25.3.7 Wildlife and Wildlife Habitat

Baseline Conditions

Field studies undertaken in 2012, 2017 and 2019 provided spatial coverage and characterization of the baseline investigation area. The results of the 2021 terrestrial baseline studies are summarized below.

Furbearers include Red Squirrel, Beaver, Canada Lynx, Canids (Red Fox, Coyote, Wolf), Snowshoe Hare, Mustelids (Weasel, Mink, Marten, Fisher, Otter and Wolverine) and Black Bear that were observed during the investigations. All of these furbearers were documented by visual confirmation or other signs, such as tracks, in the investigation area, or from historical trapping records.

Large mammals include Moose, Caribou and Wolves that were detected during the winter aerial survey. Moose wintering areas did not overlap those with Caribou (and were associated with early successional habitats in proximity to heavier cover created by forestry and burns). Wolves were generally recorded in areas with Moose, not Caribou, suggesting that Caribou may be selecting wintering areas with reduced predation risk.

Herptiles include four frog species and one snake species observed during field investigations. Spring Peeper, American Toad and Wood Frog were abundant throughout the investigation area in a wide variety of habitats, while Northern Leopard Frog was present locally in low numbers. Common Gartersnake was

observed frequently throughout the investigation area. No other snake species are expected to occur in the investigation area. No turtles were observed during field investigations.

Migratory birds include 103 species birds that were detected in the baseline investigation area during breeding bird point counts in 2021 and 2022. In 2021, 228 point-count stations were surveyed. In 2022, 164 point-count stations were surveyed, of which 77 were re-sampled point-count stations from 2021. To obtain density estimates of individual breeding bird species across the local and regional study areas, and seasons per provincial and federal avian protocols, multi-year migratory bird point count surveys have been undertaken. Density could be modelled for 45 species detected during breeding bird point count surveys. Average density across the surveyed point count locations ranged from 0-1 birds per hectare. Most bird species (34 species) had average densities below 0.1 birds per hectare. The three bird species with the highest average densities were the White-throated sparrow, Nashville Warbler, and Ruby-crowned Kinglet having average densities of 0.54, 0.74, and 0.99 birds per hectare, respectively.

Special Concern wildlife documented as confirmed or having high potential of occurrence in the SAR screening are Barn Swallow, Canada Warbler, Common Nighthawk, Eastern Wood-pewee, Evening Grosbeak, Olive-sided Flycatcher, Peregrine Falcon, Rusty Blackbird and Yellow Rail. No Special Concern mammals, herptiles or insects had a high probability of occurring.

Pathways to Potential Effects

Interactions between the transmission line and wildlife, including species at risk and their habitat, that can result in pathways to potential effects, prior to the application of mitigation measures. During the construction of the transmission line, there may be pathways to potential effects on wildlife and wildlife habitat due to the loss of vegetation during site clearing activities and the operation of equipment which will generate noise resulting in sensory disturbances. During operation of the transmission line, maintenance will be occasional required and may result in a pathway to a short-term and localized potential effect on wildlife and wildlife habitat due to noise generated from the operation of equipment. At closure, the transmission line will require decommissioning, and there may be pathways to potential effects on wildlife and wildlife habitat from noise generated by the operation of equipment. These will be localized and of short duration.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on wildlife and will be applied to the specific pathways illustrated in Table 6.25-2:

- Align the new transmission line route adjacent to the existing E1C transmission line corridor, to the extent possible, to reduce the creation of new linear corridors.
- Avoid the removal of vegetation between April 15 and August 31 during construction phase.
- Minimize the wildlife habitat disturbance by using existing trails and roads for travel, where practical.
- Minimize the removal of woody vegetation along the transmission line by limiting removal to hazard trees and only clearing for safe access and infrastructure needs.
- Minimize the disturbance in Category 1 and 2 Boreal Caribou habitats.
- Avoid clearing and construction activities in Category 1 Boreal Caribou nursery habitat during the calving and nursery period (May 1 to September 15).

- Limit the removal of moderate and high-quality Wolverine habitat in the corridor, as practicable.
- Provide wildlife (including SAR) awareness training to Project employees, prior to construction and maintenance activities.
- Log (and report as needed) observed wildlife, sign / tracks and wildlife–vehicle collisions and alter mitigation measures as appropriate, during construction and maintenance activities.
- Work outside buffers around sensitive wildlife habitat, where practicable.
- Maintain a 100 metre buffer around active Eagle nests and avoid working inside a 200 metre buffer during the breeding period (March 5 to August 31).
- Do not disturb encountered Boreal Caribou, during construction and maintenance activities.
- During calving periods, suspend heavy machinery construction activities when Boreal Caribou are detected within 500 m of the work site.
- Project-related vehicles travelling on access roads must come to a stop if wildlife is encountered and provide them with the right-of-way to cross the road.
- Obtain permits under the *Fish and Wildlife Conservation Act* to remove dens, nests, and lodges for specially protected species.
- Minimize vegetation management to that necessary for safe operation.

Potential Residual Effects

Change in Relative Abundance of Wildlife Habitat

The loss of wildlife habitat in the footprint will be greatest during the construction phase, with some rehabilitation occurring during the operations and closure phases. It has been assumed that all terrestrial and wetland vegetation communities, and therefore wildlife habitat, in the footprint will be removed during construction.

Habitat for furbearers such as fisher and lynx, includes coniferous, deciduous, mixed treed, and wetland (swamp, fen and bog) community types, whereas habitat for beaver includes open water and marsh land cover type. The construction of the transmission line will overprint 10 ha of fisher habitat, 60 ha of Canada Lynx habitat and 61 ha of beaver habitat. The direct effects on furbearer habitat are direct and localized to the footprint, and as the habitats are common throughout the RSA. In the RSA, the lynx, fisher and beaver species experienced less than a 0.1% direct loss of habitat, indicating that sufficient suitable habitat remains available elsewhere.

Habitat for moose, especially in the winter, includes community types of coniferous, deciduous, mixed treed, sparse treed, and wetland (swamp, fen and bog). The change in available moose late winter habitat is 77 ha and 5.3 ha of moose foraging habitat. This will be a localized effect, as moose habitat is common throughout the RSA. Moose may be attracted to the infrastructure corridors to exploit habitat for browsing.

An estimated area of 46.8 ha is preferred habitat for herptiles, which is common throughout the RSA. As the work is anticipated to occur during frozen conditions, and transmission line infrastructure will be placed above the high-water mark, it is unlikely that this habitat will be substantially affected.

Habitat for migratory and non-migratory birds could be affected by the construction of the transmission line. The footprint includes preferred habitat for the following groupings:

- Coniferous forest birds: includes species such as the Dark-eyed Junco, in which there is 30.9 ha.
- Deciduous forest birds: includes species such as Red-eyed Vireo, in which there is 31.5 ha.
- Deciduous/mixed forest birds: includes species such as Ovenbird, in which there is 22.4 ha.
- Nocturnal stick nester raptors: includes species such as Great-horned Owl, in which there is 23.6 ha.
- Nocturnal cavity nester raptors: includes species such as Boreal Owl, in which there is 38.1 ha.
- Diurnal stick nester raptors: includes species such as Osprey, in which there is 50 ha.
- Diurnal cavity nester raptors: includes species such as American Kestrel, in which there is 66.3 ha.
- Shorebirds includes species such as Greater Yellowlegs and Wilson's Snipe, in which there is 65.6 ha.
- Waterfowl: includes species such as Mallard, in which there is 68.6 ha.
- Bog/fen wetland birds: includes species such as Common Yellowthroat, Palm Warbler and Northern Waterthrush, in which there is 69.6 ha.

The effects on habitat are direct and localized to the footprint. The footprint is composed of upland coniferous treed (approximately 61%) habitat; as such, it does not provide abundant habitat for deciduous forest birds and wetland-dependent birds. The RSA contains mostly coniferous habitat, with deciduous habitat found in areas of forestry and disturbance.

Changes in the relative abundance in habitat for species at risk birds due to the footprint of the transmission line includes 45.3 ha of Common Nighthawk habitat and 20.3 ha of Olive-side flycatcher habitat. The effects on these habitat types are localized to the footprint, and there is sufficient suitable habitat available elsewhere in the RSA.

Within the RSA, Bald Eagle habitat is not limited (dozens of nests scattered throughout the RSA), and the construction of the transmission line will not result in a large reduction of available habitat. There will be a removal of 33.7 ha of Bald eagle habitat. Habitat loss is not generally seen as a major threat for Bald Eagles, and generally, habitat does not appear to be limiting for Bald Eagles (Armstrong 2014). A buffer of 800 metres will be maintained from active Bald eagle nests, and if nest need to be removed, it will be permitted under the *Fish and Wildlife Conservation Act*. The footprint of the transmission line includes 77.7 ha of grouse habitat, which is also abundant throughout the RSA.

6.25.3.8 Human Environment

Baseline Conditions

Baseline information on the human environment can be found in the technical support documentation (Appendix Q) and includes the results of the baseline socioeconomic study.

One trapline area are overlaps the footprint which include both terrestrial and aquatic habitat. The amount of overlap is 0.1% of trapline area SL191, as indicated in Table 6.17-1 and illustrated in Figure 6.17-3. Discussions occurred with the licence holder of SL191 and SFN regarding the proposed transmission line route as described in Section 6.17.1.2.

As shown in Figure 6.17-4, there is one bait harvesting overlapped by the footprint as indicated in Table 6.17-2. The footprint overlaps with approximately 0.9% of bait harvesting area RL0086.

A description of the economic environment is provided in Section 6.19.2, and the social environment is Section 6.20.2.

Pathways to Potential Effects

Interactions between the transmission line and the human environment can result in pathways to potential effects, prior to the application of mitigation measures. The construction of the transmission line results in a pathway to a potential effect due to loss of wildlife habitat used for trapping within the transmission line corridor that may indirectly affect the cultural environment. There are no anticipated pathways to potential effects on the human environment during the maintenance and operation of the transmission line.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on wildlife and will be applied to the specific pathways illustrated in Table 6.25-2:

- Limit the loss and alteration of wildlife habitat through by co-locating the transmission line within an existing transmission line corridor, where feasible.
- Prior to construction and throughout operations, FMG will maintain active engagement with trappers and bait harvesters regarding Project activities.

Potential Residual Effects

The construction of the transmission line will result in the loss and alteration of wildlife habitat within the footprint, which can result in displacement of wildlife species and reduce the areas available for trapping. The portion of the transmission line on Slate Falls Reserve Lands will overlap 0.9% of one trapline.

The portion of the transmission line on Slate Falls Reserve Lands will overlap one bait harvesting area, however, there will be no direct effects on bait harvesting along the transmission line corridor, as watercourses will not be removed.

As discussed in Section 6.24.6, there are no anticipated residual effects on human health as a result of the construction and operation of the transmission line.

Significance Determination

The residual effect on trapping is limited to the LSA and will last through all phases of the Project. The effect will occur continuously during all Project phases. The residual effects on trapping will be partially reversible at closure due to reduced activities and due to revegetation and/or restoration of wildlife habitat within the footprint. As a result, the adverse residual effect on the human environment due to changes in trapping is predicted to be not significant.

6.25.3.9 Traditional Land and Resource Use

Baseline Conditions

Slate Falls Nation (SFN) members identify as Anishnabeg. SFN was once part of Mishkeegogamang First Nation and established themselves in the vicinity of Bamaji Lake in the 1930s. The SFN reserve was established in 2018 (Indigenous Services Canada 2019) and is located 52 kilometres southeast of the Springpole Project and covers 6,559 ha. The reserve is accessible by a year-round forestry road (Vermillion Road) and by plane, SFN had 300 registered members in 2021 with a population growth of 29% between 2016 and 2021. A total of 213 members live on reserve. Approximately one half of the population is under

29 years of age and 27% are under 18 years of age. Ojibway is the traditional language of SFN and is still spoken by some members. Ojibway is also taught at the school in the community.

In the 1930s, mining expanded in the Pickle Lake area near Mishkeegogamang Ojibway Nation and a dam was constructed for hydroelectric power generation. The dam caused water levels to rise in Lake St. Joseph displacing some members from Mishkeegogamang Ojibway Nation to SFN and disrupted traditional annual journeys by SFN members. In 1958, waters from Lake St. Joseph were diverted to support hydroelectric power generation and caused shoreline flooding in several lakes damaging wild rice patches, fish spawning areas, and sturgeon breeding grounds and submerged cultural sites including blueberry picking areas, burial sites, and campgrounds (Kunicky 2021, SFN 2024a). Fluctuating water levels believed to be related to the dam have affected travel by boat.

SFN is a signatory to Treaty 9 and is a member of Nishinawbe Aski Nation and the Windigo First Nations Council. SFN describe that they are stewards of the Cat River System and are reliant on the land and its resources for subsistence, commercial benefit, spiritual connection, teaching, and healing. The quality and quantity of the water in the Cat River System is a high priority for SFN. Fish from lakes and rivers in SFN's traditional territory are a stable food in their diet and provide commercial fishing opportunities. Walleye is the most commonly harvested fish for personal and commercial use. Whitefish, suckers, northern pike, and lake trout are harvested for personal use. Hunting and trapping provide a large portion of the community members' diet. Moose and duck are the most frequently harvested animals; community members alsoharvest caribou, rabbit, beaver, geese, and partridge. Moose is present throughout the traditional territory but seem to be declining in numbers. Trapping furbearers, including beaver, lynx, fox, fisher, mink weasel, muskrat, wolverine, squirrel, rabbit, and marten made up a large portion of the community's economy prior to 1970. Trapping declined after 1970 with the drop in the market for furs; trapping has experienced an additional decline in the last five years. Many traditional trails and access routes are located (Figure 6.21-8) around Bamaji Lake, Kezik Lake, and Lake St. Joseph and are used to access hunting, trapping, gathering, and fishing locations. Community members have camps and cabins throughout the region for harvesting, teaching traditional practices, interacting with nature, and conducting cultural events. SFN traditional territory includes historic settlements, burial grounds, areas with cultural artifacts and areas for gathering, teaching and spiritual use. Plants are harvested for sustenance, medicinal purposes, and for tools and building materials (Kunicky 2021, SFN 2024).

SFN's use of their traditional territory has been impacted by forestry clearcuts and use of herbicides, forest fires, water level fluctuations believed to be due to hydroelectric dam developments, power line, historic mine sites, and roadside herbicide spraying (SFN 2024).

Pathways to Potential Effects

Interactions between the transmission line and the TLRU can result in pathways to potential effects, prior to the application of mitigation measures. The construction of the transmission line results in a pathway to a potential effect due to loss of wildlife habitat used for traditional harvesting within the transmission line corridor that may indirectly affect the TLRU. There are limited anticipated pathways to potential effects on the TLRU during the maintenance and operation of the transmission line including changes in vegetation communities which may affect the availability of plant harvesting opportunities and changes in wildlife habitat, which may affect the availability of wildlife harvesting opportunities, and the use of equipment leading to changes in the risks of wildlife mortality, which may affect the availability of wildlife harvesting opportunities and sensory disturbance from changes in sound levels and viewscapes, which may affect the experience associated with traditional harvesting and cultural activities.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on TLRU and will be applied to the specific pathways illustrated in Table 6.25-2:

- Local Indigenous communities and identified points of reception will be advised ahead of transmission line construction work periods and as the construction work proceeds.
- Work with local Indigenous communities to coordinate construction activities related to the transmission line to minimize overlap with the timing of traditional land use activities (e.g., fall moose hunt) and other sensitive periods.
- During construction, operation and closure phases, engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring measures.
- Where there is interest, provide opportunities to local Indigenous communities and traditional land users to harvest plants and aquatic resources within the footprint prior to construction.
- Facilitate the development and implementation of a community-based monitoring program to supplement (not duplicate) regulatory monitoring requirements.
- Support community land-based cultural activities, during construction, operation and closure of the Project.
- During construction, operation and closure phases of the Project, implement the mitigation measures for the atmospheric environment (Section 6.25.3.4), aquatic environment (Section 6.25.3.5), vegetation communities and wetlands (Section 6.25.3.6), wildlife and wildlife habitat (Section 6.25.3.7).

Potential Residual Effects

Based on information gathered to date, the Project will not directly remove traditional habitation, cultural or spiritual sites within the PDA. The route of the transmission line corridor was revised to avoid an identified ceremonial area.

During the construction and maintenance of the transmission line, there is also the potential for diminished experience of being on the land due to increased activity in the area including Project-related sensory disturbances including noise and changes to viewscapes. Sensory disturbance to traditional wildlife harvesting areas will cease upon completion of construction and maintenance activities.

The construction of the transmission line will result in the loss of vegetation, wetland and wildlife habitat used for traditional harvesting in the footprint. Vegetation communities along the transmission line are not expected to be removed but will be altered.

The construction of the transmission line will overprint 10 ha of fisher habitat, 60 ha of Canada Lynx habitat and 61 ha of beaver habitat. The direct effects on furbearer habitat are direct and localized to the footprint, and as the habitats are common throughout the RSA. In the RSA, the lynx, fisher and beaver species experienced less than a 0.1% direct loss of habitat, indicating that sufficient suitable habitat remains available elsewhere.

Habitat for moose, especially in the winter, includes community types of coniferous, deciduous, mixed treed, sparse treed, and wetland (swamp, fen and bog). The change in available moose late winter habitat is 77 ha and 5.3 ha of moose foraging habitat. This will be a localized effect, as moose habitat is common throughout the RSA. Moose may be attracted to the infrastructure corridors to exploit habitat for browsing.

Significance Determination

As discussed in Section 6.21.7, with the implementation of mitigation measures, the habitat for furbearers and large mammals is common throughout the LSA and RSA, and therefore, removal in the footprint is unlikely to affect the availability of traditional wildlife harvesting opportunities. The residual effect is constrained within the transmission line corridor, occurs once during construction and is expected to be partially reversible. As a result, the adverse residual effect on traditional wildlife harvesting due to the loss of habitat for furbearers and large mammals is predicted to be not significant.

The plant species harvested are common throughout the LSA and RSA, and therefore, removal in the footprint is unlikely to affect the availability of traditional plant harvesting opportunities. The effect occurs once during construction and is limited to the transmission line corridor. As a result, the adverse residual effect on traditional plant harvesting due to the loss of vegetation and wetland communities is predicted to be not significant.

6.25.3.10Cultural Environment

Baseline Conditions

Baseline information on archaeological resources can be found in the technical support documentation provided in Appendix S, including the Stage 1 archaeological assessment for the transmission line alternatives and mine access road (Appendix S-3). The Stage 1 archaeological assessment was conducted to determine archaeological potential along the transmission line route. This study identified two areas (5 [Cat River], and 6 [North Bamaji Lake]) adjacent to waterbodies that retain archaeological potential along the transmission line route. A Stage 2 archaeological assessment with refined areas of assessment based on detailed engineering for more precise transmission line pole locations will precede construction of the preferred transmission line route, with opportunities for Indigenous participation.

Traditional Knowledge / TLRU information shared by Slate Falls Nation identified a large 'cultural heritage area' in proximity to the transmission line route (CHR 12; SFN 2024). The selected transmission line route for the final EIS/EA (Alternative 1) was informed by discussions with Slate Falls Nation and their request to follow the existing E1C transmission line corridor through the northern portion of the SFN Reserve lands. Although portions of CHR 12 may be identified as a potential cultural heritage landscape, the transmission line route for Alternative 1 avoids overprinting CHR 12 with a new disturbance along the majority of the route. However, potential interactions with CHR 12 and the Project have been identified and additional heritage assessment work such as a Cultural Heritage Evaluation Report (CHER) or Heritage Impact Assessment may be undertaken prior to construction, if impacts to CHR 12 are identified.

Pathways to Potential Effects

Interactions between the transmission line and the cultural environment can result in pathways to potential effects, prior to the application of mitigation measures. The construction of the transmission line results in a pathway to a potential effect due to ground disturbances within the transmission line corridor that may indirectly affect the cultural environment. There are no anticipated pathways to potential effects on the cultural environment during the maintenance and operation of the transmission line.

Mitigation Measures

The following key mitigation measures will be implemented to avoid or minimize the potential effects of the Project on the cultural environment and will be applied to the specific pathways illustrated in Table 6.25-2:

- As detailed in Section 6.22.4, mitigation measures include staff training to recognize archaeological artifacts and the implementation of a Chance Find Procedure. If chance finds, deeply buried archaeological resources or human remains are encountered, appropriate protocols will be carried out in accordance with the Ontario Heritage Act and the Standards and Guidelines for Consultant Archaeologists (MCM 2011).
- As discussed in Section 6.23.4, built heritage resources and cultural heritage landscapes with known or potential cultural heritage value or interest include marking potential heritage properties will be noted on applicable Project maps to identify the heritage status of the property to Project personnel. If potential heritage properties may be directly impacted, the property will be evaluated in a CHER. If that report determines that the property has cultural heritage value or interest, an Heritage Impact Assessment will be prepared to determine specific mitigation measures to be implemented, such as documentation, salvaging or applying buffer zones, as appropriate.

Prior to construction, FMG will offer SFN an opportunity to identify whether there may be direct or indirect impacts on CHR 12 identified in the SFN Health, Socio-economic, Indigenous Knowledge and Land Use Baseline Study (SFN 2024) from the construction of the transmission line. If impacts are confirmed by Slate Falls Nation, additional work such as a CHER, and/or an Heritage Impact Assessment will be prepared prior to construction of the transmission line.

Potential Residual Effects

As discussed in Section 6.22.6, effects on archaeological resources are not anticipated after having carried out archaeological assessment programs in areas of archaeological potential prior to ground disturbance activities in the construction phase. Additonal archaeological assessment will be undertaken if refinements to the Project footprint are made during subsequent phases of the Project and protocols to protect archaeological resources will be implemented in the event of a chance find. Therefore, no residual adverse effect on archaeological resources is anticipated and a determination of significance is not required.

The selected transmission line route for the final EIS/EA (Alternative 1) was informed by discussions with SFN and their request to follow the existing E1C transmission line corridor through the northern portion of the SFN Reserve lands. Although portions of CHR 12 may be identified as a potential CHL, the transmission line route for Alternative 1 avoids overprinting CHR 12 with a new disturbance along the majority of the route. However, potential interactions with CHR 12 and the Project have been identified and additional heritage assessment work such as a CHER or Heritage Impact Assessment may be undertaken prior to construction, if impacts to CHR 12 are identified. As a result, no residual Project effects are anticipated.

6.25.4 Effects of Changes to the Environment within Federal Jurisdiction

Components of the environment where direct changes are anticipated which are within the federal jurisdiction pursuant to section 5(2) of the *Canadian Environmental Assessment Act, 2012*, include fish and fish habitat (*Fisheries Act*), migratory birds (*Migratory Birds Convention Act*) and SAR.

A full description of the existing conditions, potential effects, mitigation measures, characterization of residual effects and significance determination for these components are presented as follows:

- Section 6.10: potential effects to fish and fish habitat, including applicable mitigation measures;
- Section 6.12: potential effects to migratory birds, including applicable mitigation measures; and
- Section 6.13 to 6.16: potential effects to SAR and applicable mitigation measures, including those listed in the federal *Species at Risk Act* Schedule 1:
    - Mammalian SAR: Woodland Caribou (Threatened), Wolverine (Special Concern), Northern Myotis (Endangered) and Little Brown Myotis (Endangered);
    - Avian SAR: Eastern Whip-poor-will (Threatened), Barn Swallow (Threatened) and Canada Warbler (Threatened); and
    - Note that fish SAR are present (Section 6.10).

The associated follow-up and monitoring program for these components is described in Section 12.

6.25.5 References

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Table 6.25-1: Potentially navigable waterbodies associated with the Springpole Gold Project

Lakes and Ponds	Streams
L-1	L-5-out
L-2	L-6-out
L-3	S-16
L-4	S-17
L-5	S-18
L-6	S-19
L-16	S-21
L-17	S-22
L-18	S-23
L-19	
L-20	
Springpole Lake	
Birch Lake	

Table 6.25-2: Proposed Mitigation Measures for Potential Effects of the Project

Pathways to Potential Effects / Criteria	Phase			Proposed Mitigation Measure
	Con.	Op.	Cl.	
Atmospheric Environment	•	•	–	During construction and operation, equipment and vehicles will be operated with pollution control equipment, and a preventive routine maintenance program will be employed to reduce air emissions.
	•	–	–	During construction, site equipment will be operated to meet applicable operational noise limits at points of reception, when applicable.
	•	–	–	Prior to beginning construction in a given area, FMG will work with local Indigenous communities to confirm the presence of a points of reception that will be in use within 500 m of the transmission line right-of-way during construction activities. If confirmed, FMG will work with those land users to provide notice and minimize noise, as needed, at a given points of reception when it is in use.
	•	–	–	For helicopter use during transmission line construction, minimum flight altitudes will be maintained unless the helicopters are engaged in construction tasks, landing or departure.
Aquatic Environment	•	–	–	The construction of the transmission line will occur during frozen conditions.
	•	•	•	The transmission line poles will be located above the high-water mark to avoid in-water structures and a direct loss of fish habitat.
	•	•	–	Riparian vegetation will be maintained along the banks of watercourses crossed by the transmission line and is expected to remain adequate to prevent long term ground erosion and sedimentation.
	•	–	–	An erosion and sediment control plan will be implemented to mitigate the entry of sediment into surrounding waterbodies, where required.
Vegetation Communities and Wetlands	•	•	–	During construction and operation, minimize the clearing of vegetation within the transmission line corridor as feasible;
	•	•	–	During construction and operation, minimize the removal of woody vegetation within the transmission line corridor to maintain natural cover to adjacent areas. The removal of woody vegetation will be limited to hazard trees and clearing to provide safe construction access and infrastructure needs;
	•	•	–	Mechanical vegetation removal practices will be used, when possible;
	•	–	–	An invasive species management plan will be implemented during construction and operation to reduce the spread of invasive and non-native species from the Project.
	•	–	–	The construction of the transmission line will occur during frozen conditions to minimize compact and disturbance of wetland areas.

Table 6.25-2: Proposed Mitigation Measures for Potential Effects of the Project

	Phase			
Pathways to Potential Effects / Criteria	**Con.**	**Op.**	**Cl.**	**Proposed Mitigation Measure**
Wildlife and Wildlife Habitat	●	–	–	Align the new transmission line route adjacent to the existing E1C transmission line corridor, to the extent possible, to reduce the creation of new linear corridors.
	●	●	–	Avoid the removal of vegetation between April 15 and August 31 during construction phase.
	●	–	–	Minimize the wildlife habitat disturbance by using existing trails and roads for travel, where practical.
	●	–	–	Minimize the removal of woody vegetation along the transmission line by limiting removal to hazard trees and only clearing for safe access and infrastructure needs.
	●	●	–	Minimize the disturbance in Category 1 and 2 Boreal Caribou habitats.
	●	●	–	Avoid clearing and construction activities in Category 1 Boreal Caribou nursery habitat during the calving and nursery period (May 1 to September 15).
	●	–	–	Limit the removal of moderate and high-quality Wolverine habitat in the corridor, as practicable.
	●	●	●	Provide wildlife (including SAR) awareness training to Project employees, prior to construction and maintenance activities.
	●	●	–	Log (and report as needed) observed wildlife, sign / tracks and wildlife–vehicle collisions and alter mitigation measures as appropriate, during construction and maintenance activities.
	●	●	–	Work outside buffers around sensitive wildlife habitat, where practicable.
	●	●	–	Maintain a 100 metre buffer around active Eagle nests and avoid working inside a 200 metre buffer during the breeding period (March 5 to August 31).
		●	–	Do not disturb encountered Boreal Caribou, during construction and maintenance activities.
	●	●	–	During calving periods, suspend heavy machinery construction activities when Boreal Caribou are detected within 500 m of the work site.
	●	●	●	Project-related vehicles travelling on access roads must come to a stop if wildlife is encountered and provide them with the right-of-way to cross the road.
	●	●	–	Obtain permits under the *Fish and Wildlife Conservation Act* to remove dens, nests, and lodges for specially protected species.
	●	●	–	Minimize vegetation management to that necessary for safe operation.
Human Environment	●	●	–	Limit the loss and alteration of wildlife habitat by co-locating the transmission line within an existing transmission line corridor, where feasible.
	●	●	–	Prior to construction and throughout operations, FMG will maintain active engagement with trappers and bait harvesters regarding Project activities.

Table 6.25-2: Proposed Mitigation Measures for Potential Effects of the Project

Pathways to Potential Effects / Criteria	Phase			Proposed Mitigation Measure
	Con.	Op.	Cl.	
Traditional Land and Resource Use	●	–	–	Local Indigenous communities and identified points of reception will be advised ahead of transmission line construction work periods and as the construction work proceeds.
	●	–	–	Work with local Indigenous communities to coordinate construction activities related to the transmission line to minimize overlap with the timing of traditional land use activities (e.g., fall moose hunt) and other sensitive periods.
	●	●	●	During construction, operation and closure phases, engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring measures;
	●	–	–	Where there is interest, provide opportunities to local Indigenous communities and traditional land users to harvest plants and aquatic resources within the footprint prior to construction
	●	●	–	Facilitate the development and implementation of a community-based monitoring program to supplement (not duplicate) regulatory monitoring requirements;
	●	●	●	Support community land-based cultural activities, during construction, operation and closure of the Project;
	●	●	●	During construction, operation and closure phases of the Project, implement the mitigation measures for the atmospheric environment (Section 6.25.3.4), aquatic environment (Section 6.25.3.5), vegetation communities and wetlands (Section 6.25.3.6), wildlife (Section 6.25.3.7).
Cultural Environment	●	–	–	As detailed in Section 6.22.4, mitigation measures include staff training to recognize archaeological artifacts and the implementation of a Chance Find Procedure. If chance finds, deeply buried archaeological resources or human remains are encountered, appropriate protocols will be carried out in accordance with the Ontario Heritage Act and the Standards and Guidelines for Consultant Archaeologists (MCM 2011).
	●	–	–	As discussed in Section 6.23.4, built heritage resources and cultural heritage landscapes with known or potential cultural heritage value or interest include marking potential heritage properties will be noted on applicable Project maps to identify the heritage status of the property to Project personnel. If potential heritage properties may be directly impacted, the property will be evaluated in a CHER. If that report determines that the property has cultural heritage value or interest, an Heritage Impact Assessment will be prepared to determine specific mitigation measures to be implemented, such as documentation, salvaging or applying buffer zones, as appropriate.

Notes:
Con. = construction; Op. = operation; C. = closure; ● = mitigation is applicable; – = mitigation is not applicable